

THE OPENWORK DOME AS SACRED THEATER:
ILLUMINATION AND ILLUSION IN THE CENTRALLY PLANNED
CHURCHES OF BERNARDO ANTONIO VITTONI
Volume I

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by
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Bernardo Antonio Vittone (1704-70), an architect and engineer who practiced in the Italian Piedmont, is best known for his centrally planned churches with openwork domes. Comprised of multiple, superimposed, and perforated shells, concealed windows, and light chambers, these domes display an illusionistic and scenographic quality suggestive of contemporary ephemeral and scenographic decorations. This dissertation examines Vittone's openwork domes and interprets them as a type of sacred theater, a *theatrum sacrum perpetuum*, in which the shells and concealed windows are understood to function like the wings and hidden lamps of a stage set. In conceiving the openwork dome as sacred theater Vittone integrated various strands of Italian Baroque architecture — the conventional and the unorthodox, the academic and the bizarre — to achieve a synthesis of the highest order.

Chapter One discusses Vittone's taste for illusionism as it was formed during his architectural apprenticeship in Piedmont and his years of study at the Accademia di San Luca in Rome, where he copied drawings of ephemeral decorations and scenographic caprices by Carlo Fontana, Johann Bernhard Fisher von Erlach, Filippo Juvarra, Andrea Pozzo, and other masters. Chapter Two examines the prominence given by Vittone in his architectural theory to considerations of illumination and illusionism in which, above all, the

“voluptuous genius” of the eye is to be delighted and satisfied. Chapter Three investigates Vittone’s designs for ephemeral and scenographic decorations, including catafalques, fireworks machines, and temporary *apparati* for the sacred theater of the *Quarant’ore* Devotion, and their translation into permanent architecture. Chapter Four examines Vittone’s designs for openwork domes and pendentives, those with interlaced ribs and those with perforated shells, relating them to designs by Guarino Guarini and Guarini’s followers in Piedmont, including Gian Giacomo Plantery, Filippo Giovanni Battista Nicolis di Robilant, Giuseppe Gerolamo Buniva, and Mario Ludovico Quarini, as well as to designs by Fontana, Fischer von Erlach, Juvarra, and other academicians. Chapter Five relates Vittone’s openwork domes to *quadratura* painting, itself a form of sacred theater that relies on perspectival foreshortening and other optical devices. It considers also the Neo-Platonic and hermetic strains of Vittone’s architectural thought and the debt it owed to the ideas of Emanuele Tesauro, Paolo Segneri, Daniello Bartoli, and other Jesuits, as well as to the hagiographies and writings of various medieval saints, including St. Bernard of Clairvaux and St. Clare of Assisi.

BIOGRAPHICAL SKETCH

The author was born on 2 June 1955 in Memphis, Tennessee, and graduated in May 1973 from Christian Brothers High School also in Memphis. From 1973 to 1975 he attended Rice University where he studied art and architectural history under Professor Walter Widrig. It was in Professor Widrig's course on Renaissance and Baroque architecture, while reading Henry Millon's book on Baroque and Rococo architecture, that the author first became aware of Bernardo Vittone's centrally planned churches. In January 1978 he enrolled in Memphis State University (now the University of Memphis) where he studied art history under Professors Carol Purtle and Carol Crown, and where in August 1979 he received a Bachelor of Arts in Art History. In September 1979 he enrolled in The University of Tennessee where he received instruction in architectural history from the late Professors Marian Moffett and Lawrence Wodehouse, and Professors Ann Lester, Geraldine Gesell, and Dorothy Habel, and where, in addition, he was instructed in Medieval cultural studies by Professors Paul Barrette and Tom Heffernan. In March 1984 he earned a Bachelor of Architecture from The University of Tennessee, and in August 1984 he received, also from The University of Tennessee, a Bachelor of Arts in Medieval Studies. In August 1984 he enrolled in the Graduate School of Cornell University where he studied architectural history under Professors Christian Otto, Martin Kubelik, Robert Calkins, and Mary Woods, and where, in May 1989, he earned a Master of Arts in the History of Architecture and Urbanism. His Master's thesis is titled "The Tempietto at Maser: Function, Liturgy, and Iconography." The author is presently an Adjunct Professor at The University of Tennessee in Knoxville.

To Susan

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INTRODUCTION AND STATE OF SCHOLARSHIP

Bernardo Antonio Vittone (1704-70), an architect and engineer who practiced in the Italian Piedmont, designed numerous centrally planned churches notable for their openwork domes. Comprised of multiple, superimposed, and perforated shells, illuminated by light chambers and concealed windows, these domes are characterized by an illusionistic and scenographic quality evocative of the sacred theater whereby the shells and concealed windows function in the manner of the wings and hidden lamps of a Baroque stage set.

It was Augusto Cavallari Murat, writing in 1956, who first suggested that Vittone conceived his churches as the “festive tabernacles” and the “fancifully amazing thrones” of sacred theater, followed two years later by Rudolf Wittkower who observed that Vittone modeled his open domes directly after *quadratura* painting, itself a type of sacred theater. Cavallari Murat and Wittkower’s notions have since been explored and developed by Henry A. Millon, Richard Pommer, Paolo Portoghesi, Werner Oechslin, and more recently by Rita Binaghi. This dissertation builds upon and adds to this body of scholarship, with special attention given to Vittone’s own writings to explain various aspects of his architectural theory concerning illumination and illusion, and the principles governing the design of ephemeral and scenographic decorations.

Vittone is rare among architects of eighteenth-century Europe in having left behind not only published writings on architecture, but also an inventory of the books that he owned. With respect to his writings, we are fortunate in

having not one, but two treatises by Vittone, *Istruzioni elementari per indirizzo dei giovani allo studio dell'architettura civile* (Lugano, 1760) and *Istruzioni diverse concernenti l'ufficio dell'Architetto Civile* (Lugano, 1766), that between them number more than 900 pages of text and more than 200 pages of plates. We also have Vittone's unpublished manuscript, "L'architetto civile volume originale delle opere del' signor Bernardo Vitone [sic] insigne allievo dell'Accademia in Roma del MDCCLX," drafted in 1760 and conserved today in the Biblioteca Reale in Turin, which contains the drawings that formed the basis for the plates of *Istruzioni diverse*. Similar related drawings by Vittone are conserved in the Vandone Collection in the Museo Civico in Turin, while additional drawings by Vittone are conserved in the Musée des Arts Décoratifs in Paris.

The inventory of Vittone's library was drawn up in the days immediately following his death in 1770, and is published by Paolo Portoghesi, *Bernardo Vittone, un architetto tra illuminismo e Rococo* (Rome, 1966). From it we learn that Vittone owned architectural treatises by Vitruvius (including the various editions with commentaries by Cesare Cesariano, Giovanni Antonio Rusconi, Claude Perrault, and Colen Campbell), and by Leon Battista Alberti, Sebastiano Serlio, Daniele Barbaro, Pietro Cataneo, Andrea Palladio, Martino Bassi, Giacomo Barozzi da Vignola, Vincenzo Scamozzi, Giuseppe Viola Zanini, Giovanni Battista Montano, Francesco Borromini, Guarino Guarini, Carlo Fontana, Domenico De Rossi, Filippo Passarini, Ferdinando Ruggieri, Paolo Antonio Massazza di Valdandona, Antoine Desgodetz, François Blondel, Abraham Bosse, Charles Augustin Daviler, Bernard Forest de Bélidor, Amédée-François Frézier, Nicholas Goldmann, Johann Bernhard Fischer von Erlach, and Juan Caramuel de

Lobkowitz, as well as treatises by the scenographers, Giulio Troili, Andrea Pozzo, Ferdinando Galli Bibiena, and Giuseppe Galli Bibiena, and by the *quadraturista*, Agostino Mitelli. In addition he owned theological, religious, and literary tracts by Jesuit writers, including Emanuele Tesauro, Paolo Segneri, Daniello Bartoli, Alfonso Rodríguez, Paul Laymann, Filippo Buonanni, and Carlo Giacinto Ferrero, together with hagiographies and writings of various saints, including St. Bernard of Clairvaux and St. Clare of Assisi. Vittone also owned scientific, mathematical, and cartographic tracts by Galileo Galilei, Francesco Algarotti, Jacques Ozanam, and Joan Blaeu.

Vittone cites by name in his two treatises many of these same authors and their writings. These include Vitruvius, Alberti, Cesariano, Palladio, Serlio, Vignola, Scamozzi, Viola Zanini, Borromini, Guarini, Fontana, Blondel, Desgodetz, Perrault, Daviler, Bélidor, Frézier, Goldmann, Caramuel, Ozanam, and Bartoli. In addition, Vittone mentions by name other architects who either did not write treatises, or whose treatises are not recorded in the inventory of Vittone's library, including Apollodorus, Hermogenes, Filippo Brunelleschi, Donato Bramante, Michelangelo, Antonio Labacco, Bartolomeo Ammanati, Alessandro Capra, Gian Lorenzo Bernini, Pietro da Cortona, Filippo Juvarra, François Derand, René Ouvrard, Leonhard Christoph Sturm, and Juan Bautista Villalpando. Vittone also cites by name the painters, Giuseppe Salviati and Giuseppe Pietro Dallamano, the Jesuit, Claude-François Menestrier, the renowned scientist, Isaac Newton, the astronomers and mathematicians, Jean Picard, Pierre Bouguer, Jacques Cassini, César-François Cassini de Thury, and Nicolas Louis de Lacaille, all of whom were associated with the Royal Academy of Sciences at Paris, an institution that Vittone also names. The writings of these individuals, both the ones that Vittone owned

and the ones that he did not (but which he nevertheless mentions in his treatises), help to elucidate the architectural, philosophical, theological, and scientific ideas which informed Vittone's openwork churches.

This dissertation considers and evaluates Vittone's openwork architecture within the context of its cultural ambient. Vittone's architecture is marked equally by provincialism and cosmopolitanism. On the one hand, Vittone prosecuted a modest, mainly rural practice in his native Piedmont that followed the examples of Gian Giacomo Plantery, Francesco Gallo, Costanzo Michela, Filippo Giovanni Battista Nicolis di Robilant, Giuseppe Gerolamo Buniva, Michele Richiardi, and other provincial architects. Vittone's openwork domes also reveal, in their illusionistic quality, the marked influence of provincial *quadraturisti* who worked in Piedmont at the time: Giovanni Battista Alberoni, Giuseppe Pietro Dallamano, Giovanni Battista Bettini, Gian Domenico Rosso di Busca, and various members of the Pozzo family.

On the other hand, Vittone studied at the Accademia di San di Luca in Rome, the only Piedmontese architect of importance of his generation to have done so, and consequently his work is imbued with an exceptional sophistication and cosmopolitanism absent in the work of his provincial compatriots, but comparable to that of such illustrious figures as Bernini, Fontana, Contini, Fischer von Erlach, Gherardi, Galli Bibiena, Michetti, Juvarra, and Derizet, all of whom, like Vittone, were affiliated with the Accademia di San Luca. Many of these same academicians designed ephemeral and scenographic decorations of exceptional force, and Vittone's own designs for decorations, as well as his illusionistic architecture in general, owe much to their example.

In fact, it was during his student years at the Accademia di San Luca at Rome, in the academic exercises that he undertook copying architectural caprices and archeological reconstructions by previous masters, that Vittone's taste for illusionism and scenography was largely formed. And so when, soon upon his return from Rome, he was commissioned by the Theatines in Piedmont to help edit Guarini's *Architettura civile* for publication, Vittone was well prepared for the task. It was by means of his exposure to Guarini's writings, together with his earlier exposure to Fontana's drawings in Rome (both Guarini's writings and Fontana's drawings having been held at that time in private, highly restricted collections), that Vittone's architectural formation was crowned. And it was precisely his improbable but brilliant synthesis of Fontana and Guarini, the one a champion of academic convention, the other the purveyor of licentious unorthodoxy, that marks the distinctive, innovative character of Vittone's illusionistic and scenographic architecture.

Modern scholarship on Vittone and his architecture began in 1920 with the first monograph on the subject, Eugenio Olivero's *Le opere di Bernardo Antonio Vittone architetto piemontese del secolo XVIII*, that remains very useful for information on Vittone's life, writings, and architecture. For roughly fifty years thereafter Vittonian studies were advanced primarily by the work of Olivero, Albert Erich Brinckmann, Giacomo Rodolfo, Augusto Cavallari Murat, Nino Carboneri, Giulio Carlo Argan, Carlo Brayda, Mario Passanti, Paolo Portoghesi, Umberto Chierici, Rudolf Wittkower, Henry A. Millon, and Richard Pommer. Since 1970 Vittonian studies have been advanced largely by the contributions of Vittoria Moccagatta, Werner Oechslin, Marcello Fagiolo, Augusta Lange, Bruno Signorelli, Bianca Tavassi La Greca, Pasquale Cantone, Giuseppe Dardanella, Walter Canavesio, and Rita Binaghi.

Olivero's monograph of 1920 was followed soon by Carlo Bricarelli, "Bernardo Antonio Vittone architetto piemontese del secolo XVIII," *La civiltà cattolica* (1921); and by Olivero's supplementary essays published in *Bollettino della Società Piemontese di Archeologia e Belle Arti*, "Sopra alcune architettura di Bernardo Vittone," (1924); "La Cappella della B. V. delle Grazie nel Duomo di Chieri," (1924); and "La Parrocchia di Riva di Chieri," (1925). Thereafter Albert Erich Brinckmann's masterful study, *Theatrum Novum Pedemontii* (1931), appeared, which, though concerned in general with Piedmontese Baroque architecture, offers insights on Vittone architecture. This was followed by Giulio Carlo Argan, "Per una storia dell'architettura piemontese," *L'arte* (1933); Giacomo Rodolfo, "Notizie inedite dell'architetto Bernardo Vittone," *Atti della Società Piemontese di Archeologia e Belle Arti* (1933), a particularly useful source on Vittone's family and life; Eugenio Olivero, *La chiesa di S. Francesco d'Assisi in Torino e le sue opere d'arte* (1935); Guido and Bartolomeo Gallo, "La chiesa dell'arciconfraternità di S. Croce in Caramagna, Piemonte," *Bollettino Deputazione Subalpina di Storia Patria, Sezione di Cuneo* (1941), which first identified the high altar there as Vittone's work; Carlo Brayda, "Opere inedite di Bernardo Antonio Vittone," *Bollettino della Società Piemontese di Archeologia e Belle Arti* (1947); Paolo Tosel, "Un edificio Vittoniano a Pinerolo. L'ex-ricovero dei Catecumeni," *Bollettino della Società Piemontese di Archeologia e Belle Arti* (1948); and Mario Passanti, "Ospedali del Sei e Settecento in Piemonte," *Atti e rassegna tecnica della Società degli Ingegneri e degli Architetti di Torino* (1951).

In 1956 Augusto Cavallari Murat published his important essay, "L'architettura sacra del Vittone," *Atti e rassegna tecnica della Società degli Ingegneri e degli Architetti di Torino*, which greatly advanced our understanding

of Vittone's centrally planned churches, a subject that was further examined by Paolo Portoghesi, "Metodo e poesia nell'architettura di Bernardo Antonio Vittone," *Bollettino della Società Piemontese di Archeologia e Belle Arti* (1960-61); and Carlo Perogalli, "Nota sull'architettura di Bernardo Vittone," in *Arte in Europa* (1966). Vittone's centrally planned churches were the focus of interest as well of scholars who introduced the architect and his work to an English-speaking audience, namely Rudolf Wittkower, Henry A. Millon, and Richard Pommer. Wittkower's chapter on Vittone in *Art and Architecture in Italy 1600 to 1750* (1st ed., 1958), for example, and his essay, "Vittone's Domes," in *Studies in the Italian Baroque* (1975; Italian ed., 1972), both emphasize the primacy and innovation of Vittone's openwork, centrally planned churches, an approach that was continued by Millon, "Vittone," *The Architectural Review* (1962); *Baroque and Rococo Architecture* (1961); "Vittone, Bernardo Antonio," in *Macmillan Encyclopedia of Architects* (1982); and by Pommer, *Eighteenth-Century Architecture in Piedmont: The Open Structures of Juvarra, Alfieri and Vittone* (1967). These works by Wittkower, Millon, and Pommer remain the best accounts in English of Vittone and his architecture. Wittkower also has produced an abbreviated essay on Vittone's Paris drawings, "Vittone's Drawings in the Musée des Arts Décoratifs," in *Studies in Renaissance and Baroque Art Presented to Anthony Blunt in His 60th Birthday* (1967), the most important study of the subject in any language, and a subject that is in much need of further research. And Pommer has written two essays on Vittone's Neo-Guarinesque architecture, "Costanzo Michela and Santa Marta in Agliè: A Guarinesque Rarity," *The Art Bulletin* (1968); and "A Note on Santa Marta in Agliè," in *Guarino Guarini e l'internazionalità del Barocco* (1970). Other English sources include the chapters and entries on Vittone in Christian Norberg-

Schulz, *Late Baroque and Rococo Architecture* (1974); Susan S. Munshower, ed., *Architectural Fantasy and Reality* (1982); Dora Wiebenson, *Architectural Theory and Practice from Alberti to Ledoux* (1982); Alberto Pérez-Gomez, *Architecture and the Crisis of Modern Science* (1983); John L. Varriano, *Italian Baroque and Rococo Architecture* (1986); Harold Alan Meek, *Guarino Guarini and his Architecture* (1988); and John Hendrix, *Architectural Forms and Philosophical Structures* (2003). In addition, there are Norberg-Schulz's two essays of 1972 which have now been translated into English, "Centrality and Extension in Bernardo Vittone's Sacred Works," and "Space in Architecture after Guarini," in *Architecture: Meaning and Place: Selected Essays* (1988); Susan M. Dixon's entry, "Vittone, Bernardo," in *International Dictionary of Architects and Architecture* (1993); and William Bruce Stargard's comprehensive study of Vittone's hospital and hospice architecture, "Repression and Catholic Reform: Bernardo Vittone's Commissions for Charitable Institutions," Ph.D. dissertation, Columbia University (1995).

In 1963 an exhibition of Piedmontese Baroque art and architecture was held in Turin accompanied by a catalogue, *Mostra del Barocco Piemontese*, edited by Vittorio Viale with a section on "Architettura" by Nino Carboneri, which contains useful information on Vittone and his work. In 1966 Paolo Portoghesi published *Bernardo Vittone, un architetto tra illuminismo e Rococo*, which supplanted Olivero's book as the standard monograph on the subject. As its title indicates, Portoghesi's book interprets Vittone's architecture as occupying the threshold between the Age of Rococo and the Age of Enlightenment. Portoghesi distinguishes between Vittone's early architecture before 1750, characterized by manifold spaces illuminated by indirect, reflected light, and his late architecture after 1750, characterized by integral

spaces illuminated by direct, incidental light. This was followed by Nino Carboneri and Vittorio Viale, ed., *Bernardo Vittone, architetto* (1967), a catalogue of an exhibition of Vittone's work held that year in the restored Vittonian church of Santa Chiara in Vercelli. This in turn was followed by Vittorio Viale's two-volume edition of *Bernardo Vittone e la disputa Fra classicismo e barocco nel settecento* (1972), a collection of essays presented two years earlier at a conference of the Accademia delle Scienze in Turin.

Knowledge of Vittone's life, education, and work has been greatly increased by scholarship of the last several decades. For example, the date and place of Vittone's birth, which for so long were unknown, have been conclusively established by Pasquale Cantone in his two essays, "Nota genealogica sul architetto Bernardo Antonio Vittone (Torino 19-8-1704/Torino 19-10-1770)," *Studi Piemontesi* (1989); and "Ancora sulla genealogia di Bernardo Antonio Vittone," *Studi Piemontesi* (2003). Likewise, our knowledge of Vittone's family, youth, and early practice has been expanded by Walter Canavesio's two essays, "Storia di famiglia. La giovinezza di Bernardo Antonio Vittone," in *Il voluttuoso genio dell'occhio* (2005); and "Anni di apprendistato. Giovanni Battista Borra nella studio di Vittone," *Studi Piemontesi* (1997). Our understanding of Vittone's education at the Accademia di San Luca in Rome has been greatly advanced by Henry A. Millon, "Alcune osservazioni sulle opere giovanili di Bernardo Antonio Vittone," *Bollettino della Società Piemontese di Archeologia e Belle Arti* (1958-59); Vincenzo Golzio, "L'architetto Bernardo Vittone Urbanista," in *Atti del X Congresso di Storia dell'Architettura* (1959); and Jörg Garms, "Die Architektur Themen des Concorso Clementino der Accademia di San Luca von 1732," *Wiener Jahrbuch für Kunstgeschichte* (1969); Werner Oechslin "Un tempio di Mosè-i disegni

offerti da B. A. Vittone all'Accademia di San Luca nel 1733," *Bollettino d'Arte* (1967) and his published dissertation, *Bildungsgut und Antikenrezeption im frühen Settecento in Rom* (1972), summarized in Italian as "Il soggiorno romano di Bernardo Antonio Vittone," in *Bernardo Vittone e la disputa* (1972); by Paolo Micalizzi in "Arte, scienze e città nei temi del Concorso Clementino del 1732 dell' Accademia di S. Luca," *Storia della città* (1978); and by Windsor F. Cousins, Jr. in his two essays, "Concorso Clementino of 1732," and "Accademico di Merito of 1733," in *Architectural Fantasy and Reality* (1982).

Scholarship of recent decades has also shed much light on individual works by Vittone, particularly his early works accomplished during the 1730s. For example, Vittone's renovation to the Palazzo Municipale at Bra (1730-32) is now conclusively dated, and its construction history established, by Roberto Dellarossa, "Il Palazzo Municipale di Bra," in *Studi sull'architettura e le arti applicate a Bra* (1986); and Lidia Botto, "Architettura," in *Arte in Bra* (1988). Likewise, the dating and construction history of Santa Maria della Neve at Pecetto (1730-39), and Vittone's precise involvement in the commission, are firmly established by Nino Carboneri, "Appunti sul Vittone," *Quaderno dell'Istituto di Storia dell' Architettura* (1963); and Richard Pommer, *Eighteenth-Century Architecture in Piedmont* (1967). Vittone's design for the entrance stairway to Filippo Juvarra's Villa Morra di Lavriano at Villastellone (1732-33) is identified by Vittoria Moccagatta, "La juvarriana Villa Morra di Lavriano a Villastellone," in *Studi juvarriani* (1985). The polychrome marble pavement of the presbytery at Santi Martiri (1734), previously attributed to Juvarra, is now securely reattributed to Vittone on the basis of documentation published by Walter Canavesio, "Inediti vittoniani," *Bollettino della Società Piemontese di Archeologia e Belle Arti* (1996). Likewise, Vittone's unexecuted project for the

Chapel of Sant'Evasio in the Cathedral at Casale Monferrato (1735) is identified and documented by Nino Carboneri, "Aspetti e problemi dell'arte a Casale dal barocco a neoclassicismo," in *Quarto congresso di antichità e d'arte* (1974); and Giulio Ieni, "Quattro disegni progettuali di Bernardo Vittone nelle biblioteche casalesi," *Monferrato Arte e Storia* (1994).

Scholarship of recent decades has also added much to our knowledge of Vittone's designs for temporary decoration. Vittone's urban decoration in Turin commissioned for the royal wedding in Turin of King Carlo Emanuele III and Princess Elisabeth Theresa of Lorraine (1737) is identified by Lydia Kessel, *Festarchitektur in Turin* (1995); and Rosanna Roccia, "Torino nelle vedute incise del primo Settecento," in *Itinerari juvarriani* (1995). Vittone also designed two undated, unexecuted projects – a fireworks machine for a royal coronation and a fountain in an urban square that takes as its theme *The Passage of Time* – that are discussed by Marcello Fagiolo, "L'universo della luce nell'idea d'architettura del Vittone," in *Bernardo Vittone e la disputa* (1972); and Bianca Tavassi La Greca, "«Decorazione» ed «Adattamento» nella poetica di Bernardo Vittone," in *Studi in onore di Giulio Carlo Argan* (1994).

In addition, Vittone designed two unexecuted versions of a Neo-Gothic façade for Milan Cathedral that are the subject of study by Karl Noehles in his two articles, "I progetti del Vanvitelli e del Vittone per la facciata del Duomo in Milano," in *Arte in Europa* (1966); and "I vari atteggiamenti nel confronto del gotico nei disegni per la facciata del Duomo di Milano," in *Il Duomo di Milano* (1969). Vittone's attitude toward the Gothic is also examined by Nino Carboneri, "Il dibattito sul gotico," in *Bernardo Vittone e la disputa* (1972); and Rita Binaghi, "Sensibilità strutturale gotica nell'architettura di Bernardo

Antonio Vittone,” in *Presenze medievali nell’architettura di età moderna e contemporanea* (1997).

It was during the 1730s that Vittone edited Guarino Guarini’s architectural treatise, *Architettura civile*, for publication, an activity put into relief by Werner Müller, “The Authenticity of Guarini’s Stereotomy in his *Architettura Civile*,” *Journal of the Society of Architectural Historians* (1968); and “Vittone ed il modo stereotomico,” in *Bernardo Vittone e la disputà* (1972), who nevertheless concludes that Vittone had a faulty understanding of Guarini’s stereotomy; and by Nino Carboneri, “Introduction,” to Guarini’s *Architettura civile* (reprint ed., 1968). Vittone’s comprehension of Guarini’s architectural theory, especially as it relates to the development of his own later theory, is examined by Bianca Tavassi La Greca, *Bernardo Antonio Vittone, architetto e teorico del ‘700* (1985); “Considerazioni sull’opera teorica di Bernardo Vittone. Guarini/Vittone: una linea teorica di continuità o di frattura?” *Storia dell’Arte* (1988); “«Per una storia dell’architettura piemontese»: dall’«arbitrio calcolato» del Guarini al «positivo empirismo» del Vittone,” in *Studi in onore di Giulio Carlo Argan* (1985); “«Decorazione» ed «Adattamento» nella poetica di Bernardo Vittone,” in *Studi in onore di Giulio Carlo Argan* (1994); and “Bernardo Vittone: il positivo empirismo,” in *Giulio Carlo Argan: Progetto e destino dell’arte* (2005); and by John Hendrix, “Guarino Guarini and Bernardo Vittone,” in *Architectural Forms and Philosophical Structures* (2003). Aspects of Vittone’s architectural theory are examined also by Augusto Cavallari Murat, “Aggiornamento tecnico e critico nei trattati vittoniani,” in *Bernardo Vittone e la disputà* (1972); and Eugenio Battisti, “La rivalutazione del ‘barocco’ nei teorici del settecento,” in *Bernardo Vittone e la disputà* (1972).

Likewise, Vittone's drawings, produced throughout the duration of his practice, and conserved today in the Museo Civico in Turin, the Biblioteca Reale in Turin, and the Musée des Arts Décoratifs in Paris, are the subject of studies by Augusto Cavallari Murat, "Alcune architetture piemontese del settecento in una raccolta di disegni del Planteri, del Vittone e del Quarini," *Torino* (1942); Nino Carboneri, "Appunti sul Vittone," *Quaderno dell'Istituto di Storia dell' Architettura* (1963); Nino Carboneri and Vittorio Viale, ed., *Bernardo Vittone, architetto* (1967), and Rudolf Wittkower, "Vittone's Drawings in the Musée des Arts Décoratifs," in *Studies in Renaissance and Baroque Art Presented to Anthony Blunt in His 60th Birthday* (1967).

Upon completing his work on Guarini's treatise in the mid-1730s Vittone designed a number of centralized, Neo-Guarinian churches that helped to inaugurate the Guarinian Revival in Piedmont. This activity is described by Carlo Baracco, "Bernardo Vittone e l'architettura guariniana," *Torino* (1938); Maria Anderegg-Tille, *Die Schule Guarinis* (1962); Nino Carboneri, "Guarini ed il Piemonte," in *Guarino Guarini e l'internazionalità del Barocco* (1970); Richard Pommer's two essays, "Costanzo Michela and Santa Marta in Agliè: A Guarinesque Rarity," *The Art Bulletin* (1968); and "A Note on Santa Marta in Agliè," in *Guarino Guarini e l'internazionalità del Barocco* (1970); and Augusto Cavallari Murat's two essays, "Concretezza delle revisioni critiche su Guarini e Vittone," *Atti dell'Accademia delle Scienze di Torino* (1974); and "L'avventura neoguariniana di Vittone," in *Come carena viva* (1982).

In addition, Vittone's various Neo-Guarinian churches have been the subjects of individual investigation. For example, the Sanctuary of the Visitazione at Vallinotto (1738-39), a Guarinesque church with an interlaced ribbed dome, is examined by Umberto Chierici in two essays, "Vittone

inedito," *Arte Lombarda* (1970); and "La cupola del Vallinotto," in *Carignano. Appunti per una lettura della città*, IV ([1978]), who reports on the condition of the original dome of the church uncovered during restoration undertaken in 1966; by Carlo Arduino and Guido Gentile, "Itinerari per una lettura," in *Carignano. Appunti per una lettura della città*, I ([1980]), who report on the church's furnishings; and by Augusta Lange, "Carignano – Santuario del Vallinotto, scheda," in *Jacopino Longo pittore* (1983). A similar Guarinesque church with an interlaced ribbed dome, San Luigi Gonzaga at Corterano Monferrato, is attributed to Vittone by Francesco Gamarino, "Architettura barocca nel Monferrato," *Bollettino della Società Piemontese di Archeologia e Belle Arti* (1947); and its construction conclusively dated to 1760 by Francesco Gamarino, Alda Panizza, Giovanni Fantino, and Raffaella Gamarino, *S. Luigi Gonzaga di Corterano* (1970); a dating accepted by Henry A. Millon, "La formazione piemontese di B. Vittone fino al 1742," in *Bernardo Vittone e la disputa* (1972), but who nevertheless dates the design itself to about 1740. Vittone's first (unexecuted) project for Santa Chiara in Turin (1742), which also features a Guarinesque interlaced ribbed dome, is studied and documented by Augusta Lange, "Disegni originale di Bernardo Vittone per la chiesa e Monastero di Santa Chiara di Torino," in *Bernardo Vittone e la disputa* (1972). Finally, Vittone's unexecuted project for San Francesco at Nice, in this case a longitudinal church based on Guarini's project for Santa Maria Ettinga in Prague, is discussed by Carlo de San Antonio Gómez, "Concordancias geométricas, en los trazados de las plantas, de tres iglesias no construídas del Siglo XVIII," in *Il disegno di progetto dalle origini al XVIII secolo* (1997).

Other openwork churches by Vittone erected on a centralized plan, but with perforated shells instead of interlaced ribbed vaulting, have also received

study. San Bernardino at Chieri (1740-44) is the subject of Laura Quaglino Palmucci's investigation, "Bernard-Antoine Vittone: églises Saint-Bernardin de Chieri et Sainte-Claire de Verceil," in *Congrès Archéologique du Piémont* (1977). Santa Chiara at Bra is examined by Paolo Portoghesi, "La chiesa di Santa Chiara a Bra nell'opera di Bernardo Antonio Vittone," *Quaderni dell'Istituto di Storia dell'Architettura* (1962); and Lidia Botto, "Architettura," in *Arte in Bra* (1988). San Gaetano at Nice, a commission inherited from Guarini, is examined by Carlo Ceschi, "Progetti del Guarini e del Vittone per la chiesa di S. Gaetano a Nizza," *Palladio* (1941); Dominique Foussard and Georges Barbier, "De Juvarra à Vittone: chefs-d'œuvre baroque-rococo dans lumière de Nice," in *Baroque: Niçois et Monégasque* (1989); and Jean-Michel Sanchez, "L'abbaye de Saint-Pons à Nice: une oeuvre de Filippo Juvarra influencée par Pierre Puget?" *Provence historique* (2003). Vittone's project for the Sanctuary at Oropa, another commission inherited from Guarini, is discussed by Andrea Rolando, "I disegni di Guarino Guarini, Francesco Gallo e Bernardo Antonio Vittone per la chiesa nuova del Santuario di Oropa," in *Il disegno di progetto dalle origini al XVIII secolo* (1997). Finally, Vittone's direct involvement with the commission of Juvarra's destroyed church of Sant'Andrea at Chieri, widely recognized to have exerted a marked influence on Vittone's own design for Santa Chiara at Bra, is established by Walter Canavesio in his two essays, "Il campanile di Sant'Andrea a Chieri opera di Bernardo Antonio Vittone: un'ipotesi," *Bollettino della Società Piemontese di Archeologia e Belle Arti* (2001-02); and "I progetti di Bernardo Antonio Vittone per l'organo della chiesa di Sant'Andrea a Chieri," *Studi Piemontesi* (2002).

Still other Vittonian churches, without multi-shelled, openwork domes, but possessing nevertheless scenographic features such as perspectival

diminutions and hollowed-out pendentives, have also been elucidated by scholarship of recent decades. Vittone's church of the Assunta at Grignasco (1750-83), for example, which incorporates perspectival diminutions in both plan and interior elevation, is the subject of a comprehensive study by Paolo and Giuseppe Sitzia published in three essays, "Vittone a Grignasco: La Chiesa dell'Assunta capolavoro Barocco della seconda metà del XVIII secolo," *Novarien* (1982); "La parrocchiale di Grignasco: documenti e cronaca del cantiere: I parte, Bernardo Antonio Vittone e la costruzione del Tempio," *Bollettino d'Arte* (1989); "La parrocchiale di Grignasco: documenti e cronaca del cantiere: II parte, I lavori dopo il Vittone fino all'Ottocento," *Bollettino d'Arte* (1989); and a book, *Vittone a Grignasco: l'Assunta, una chiesa barocca tra Grignasco Roma e Torino* (2006); after an earlier study by Paolo Portoghesi, "La parrocchiale di Grignasco nell'opera di B. A. Vittone," in *Atti e Memorie del Terzo Congresso Piemontese di Antichità ed Arte* (1960). The Chapel in the Ospizio di Carità at Carignano (1744-49), notable for its hollowed-out pendentives, is treated by Carlo Arduino, "Note su alcuni progetti vittoniani per edifici carignanesi," in *Carignano. Appunti per una lettura della città*, IV ([1978]). Santa Maria di Piazza in Turin (ca. 1751-54), which also features hollowed-out pendentives, is examined by Franca Ceresa, "Disegno e geometria nel Barocco in Piemonte. La chiesa di Santa Maria di Piazza in Torino. Geometrie formali e geometrie percettive," in *La rappresentazione dell'architettura e dell'ambiente*, Vol. 3, *Principe costitutivi del progetto tra artificio e natura* (1998); and Rita Binaghi, "Gli interventi del Vittone," in *I Sacramentini a Santa Maria di Piazza* (2001). Vittone's renovation to the crossing of Santi Pietro e Paolo in Mondovì Breo, in which hollowed-out pendentives are again incorporated, is studied by Nino Carboneri, "Gallo e Vittone nella chiesa dei

Santi Pietro e Paolo in Mondovì Breo,” *Bollettino della Società Piemontese di Archeologia e Belle Arti* (1948); Lorenzo Bertone, *Due chiese di Breo: la parrocchiale dei Santi Pietro e Paolo e la chiesa di San Filippo Neri a Mondovì* (1991); and *Una comunità dal medioevo all’età moderna. La chiesa dei Santi Pietro e Paolo in Mondovì* (1998). Finally, Santa Croce (now Santa Caterina) at Villanova di Mondovì (1755), which features an especially refined version of the hollowed-out pendentive, is treated by Nino Carboneri, *Un gioiello architettonico a Villanova Mondovì. La chiesa parrocchiale di Santa Caterina* (1950).

Vittone’s work at the Jesuit church of Santi Martiri and adjacent Collegio Vecchio in Turin, begun in the mid-1730s and continued until the end of his practice, has been greatly elucidated by Vittoria Moccagatta and Bruno Signorelli, with Moccagatta having written four essays on the subject, “Bernardo Antonio Vittone. Problemi attributivi e nuovi contributi,” *Palladio* (1969); “La chiesa dei Santi Martiri di Torino. Architettura, decorazione, arredo,” *Bollettino della Società Piemontese di Archeologia e Belle Arti* (1971-72); “La chiesa torinese dei Santi Martiri di Torino. Aggiunte attributive, nuove attribuzioni, precisazioni,” *Bollettino della Società Piemontese di Archeologia e Belle Arti* (1976-77); and “La chiesa dei Santi Martiri di Torino. Inserti di tardo Cinquecento nella settecentesca sistemazione degli arredi di sacrestia. Giovanni Taurino intagliatore,” *Bollettino della Società Piemontese di Archeologia e Belle Arti* (1978-80); and Signorelli having written three essays on it, “La chiesa dei SS. Martiri e il Collegio vecchio della Compagnia di Gesù a Torino,” in *L’architettura della Compagnia di Gesù in Italia, XVI-XVIII secolo* (1992); “Per i Santi Martiri una chiesa protagonista,” in *Torino. I percorsi religiosità* (1998); and “Una chiesa per maggior servizio di Dio, aiuto delle anime et ornamento di questa città,” in *I Santi Martiri: una chiesa nella storia di Torino* (2000).

In addition to having worked for the Jesuits at Santi Martiri, Vittone owned numerous writings by Jesuits on religious, theological, and literary topics. The influence of Jesuit thought on Vittone and his assistant, Giovanni Battista Galletto, is the subject of Walter Canavesio's insightful investigation, "Presenze gesuitiche nella cultura di Bernardo Vittone e Giovanni Battista Galletto," in *La Compagnia di Gesù nella Provincia di Torino* (1998). And the topic of Vittone's occult and Hermetic thought, with possible ties to Freemasonry, is addressed by Marcello Fagiolo, "L'universo della luce nell'idea d'architettura del Vittone," in *Bernardo Vittone e la disputa* (1972).

The connection between Vittone's domes and *quadratura* is discussed by Rudolf Wittkower, "Vittone's Domes," in *Studies in the Italian Baroque* (1975; Italian ed., 1972); Werner Oechslin, "Vittone e l'architettura europa del suo tempo," in *Bernardo Vittone e la disputa* (1972); and by Rita Binaghi in two essays, "Sistemi voltati di Bernardo Vittone ed alcune realizzazioni del quadraturismo," in *L'Architettura dell'Inganno* (2004); and "Geometria e Scenografia. Due scienze al servizio delle architetture vittoniane," in *Il voluttuoso genio dell'occhio* (2005). Vittone's relation with the painters and sculptors who decorated his churches is examined by Laura Facchin, "Bernardo Antonio Vittone, la pittura e i pittori," in *Il voluttuoso genio dell'occhio* (2005); and Franco Gualano, "Gli scultori e Vittone: contatti, collaborazioni e influenze," in *Il voluttuoso genio dell'occhio* (2005). In addition, the interior frescoes of his churches, in particular the Visitazione at Vallinotto and Santa Chiara at Bra, have received study. The interior frescoes of the Visitazione at Vallinotto, painted by Pietro Francesco Guala, are examined by Noemi Gabrielli, "Ultime segnalazioni di opere d'arte in Piemonte," *Bollettino della Società Piemontese di Archeologia e Belle Arti* (1960-61), the first to identify

Guala as the painter. Guala's frescoes are also discussed Giovanni Battista Lusso, *Carignano: i "luoghi pii"* (1971); and Caterina Calza and Attilio Bonci, *Pietro Francesco Guala a Robaronzino: Capolavori del barocco piemontese in una chiesa di Ciriè* (1998). The interior frescoes of Santa Chiara at Bra, the work of Pietro Paolo Operti, are examined by Lidia Botto in two publications, *Pietro Paolo Operti, Agostino Cottolengo, Gioacchino Nogaris: Materiali per la conoscenza di tre pittori braidesi, 1704-1964* (1986); and "Pittura," in Ettore Molinaro, ed., *Arte in Bra* (1988); by Enrico Perotto in two articles, "Novità su Pietro Paolo Operti, pittore braidese del Settecento," *Studi Piemontesi* (1991); and "Il 'virtuosissimo sig. Pietro Paolo Operti' pittore braidese," *Cuneo Provincia Granda III* (1991); and by Laura Facchin, "Bernardo Antonio Vittone, la pittura e i pittori," in *Il voluttuoso genio dell'occhio* (2005).

Additional contributions to Vittonian studies, include Giuseppe Moglia, "Il rapporto tra disegno, progetto e realizzazione formale nell'architettura di Bernardo Vittone," in *Il disegno di progetto dalle origini al XVIII secolo* (1997); Augusto Sistri, "Benedetto Alfieri, Bernardo Vittone: considerazioni sulla storiografia dell'architettura del Settecento in Piemonte," in *Per conoscere Torino capitale europea: saggi sugli interventi artistici* (1997); Rita Binaghi, "Un architetto al servizio della settecentesca 'Reggia Università degli Studi' di Torino. Bernardo Antonio Vittone ed il magistrato della Riforma," *Bollettino della Società Piemontese di Archeologia e Belle Arti* (2000); Paolo Cornaglia, "Bernardo Antonio Vittone: i luoghi della religiosità," in *Di architetti di chiese di palazzi* (2003); and Carola Benedetto and Pier Ilario Benedetto, *La luce ha mani e piedi: l'architettura di Bernardo Vittone, il romanico di Bernardo Chiaravalle e la modernità* (2003).

CHAPTER ONE

VITTONE'S ARCHITECTURAL FORMATION

Apprenticeship and Early Practice in Piedmont

Life and Family Background

Bernardo Antonio Vittone was born on 19 August 1704 in Turin and died there, in the Casa Ormea, on 19 October 1770.¹ He was the son of

¹ The date and place of Vittone's birth have been conclusively established by P. CANTONE, "Nota genealogica sul architetto Bernardo Antonio Vittone (Torino 19-8-1704 / Torino 19-10-1770)," *Studi Piemontesi* XVIII:2 (November 1989), pp. 579-600; and IDEM., "Ancora sulla genealogia di Bernardo Antonio Vittone," *Studi Piemontesi* XXXII:1 (June 2003), pp. 99-100. See also E. OLIVERO, *Le opere di Bernardo Antonio Vittone architetto piemontese del secolo XVIII* (Turin, 1920), pp. 21-24, who publishes numerous documents referring to both Vittone and his father as natives of Turin, including a death notice from the registers of Vittone's parish church of Sant'Eusebio (now San Filippo) stating that Vittone was buried in the family vault at the church of San Carlo in Turin: "Il sig. Bernardo Antonio figlio del fu Nicolao Vittone, d'anni 65, morto d'accidente in Casa Ormea li 19, sepolto li 21 ottobre 1770 nella chiesa dei PP. di S. Carlo nel sepolcro dei sui maggiori." A second document, this one from San Carlo itself, and published by R. POMMER, *Eighteenth-Century Architecture in the Piedmont: The Open Structures of Juvarra, Alfieri and Vittone* (New York, 1967), p. 259, also states that Vittone was buried in his ancestral sepulchre in Turin: "Li 19 ottobre 1770 alle ore due e mezza di francia di sera passò da questa mortal vita il Sig. Bernardo Antonio Vittone ingegnere fratello Matteo Filiberto canonico della Cattedrale per un accidente d'apoplessia d'età d'anni 68 in circa; li 21 di sera fu portato il di lui cadavero nella nostra chiesa; alla mattina poi del 22 dopo cantata la messa fu sepolto nella sepoltura de' suoi antenati..." Both death notices are in agreement that Vittone died suddenly (perhaps from a stroke) on 19 October 1770. The first, however, records that his body was buried on 21 October, the second that it was brought to the church on 21 October and buried the following day. Both notices give erroneous information regarding Vittone's age at the time of his death, the first stating that he was 65 years old, the second that he was about 68. Vittone in fact was 66 years of age when he died. On Vittone's native origins, see also H.A. MILLON, "Native Origins of Architects in Turin and the Piedmont," in *Arte in Europa, scritti di storia dell'arte in onore di Edoardo Arslan*, 2 vols. (Milan, 1966), I, pp. 675-678. On Vittone and his architecture, see also C. BRICARELLI, S.J., "Bernardo Antonio Vittone architetto piemontese del secolo XVIII," *La civiltà cattolica* LXXII (1921), pp. 230-240; A. CAVALLARI MURAT, "L'architettura sacra del Vittone," *Atti e rassegna tecnica della Società degli Ingegneri e degli Architetti di Torino* n.s. X:2 (February 1956), pp. 35-52; A.E. BRINCKMANN, "Tre astri nel cielo del Piemonte: Guarini, Juvarra, Vittone," in *Atti del X Congresso di Storia dell'Architettura* (Rome, 1959), pp. 347-357; H.A. MILLON, "Vittone," *The Architectural Review* CXXXII:786 (August 1962), pp. 94-104; IDEM., "Vittone, Bernardo Antonio," in A.K. Placzek, ed., *Macmillan Encyclopedia of Architects*, 4 vols. (London, 1982), IV, pp. 342-347; V. Viale, ed., *Mostra del Barocco Piemontese*, 3 vols. (Turin, 1963), I, pp. 1-87; P. PORTOGHESI, *Bernardo Vittone, Un architetto tra illuminismo e Rococo* (Rome, 1966); N.

Giuseppe Nicola Vittone, a cloth merchant and moneylender, and Francesca Maria Comune, second wife of Giuseppe Nicola and sister-in-law of the architect and engineer, Gian Giacomo Plantery.² Vittone's father, already an elderly widower with six children at the time he wed Vittone's mother, died while Vittone was young.³ After his father's death Vittone appears to have been raised by his elder stepbrother, Matteo Filiberto, with whom he was

CARBONERI and V. VIALE, eds., *Bernardo Vittone architetto. Mostra organizzata nella restaurata chiesa vittoniana di Santa Chiara* (Turin-Vercelli, 1967); V. VIALE, ed., *Bernardo Vittone e la disputa fra classicismo e barocco nel settecento*, 2 vols. (Turin, 1972); A.B. GIUDICI and C.F. MEMOLI, "El arquitecto Bernardo Vittone," in *La arquitectura y las artes plásticas del siglo XVIII en Europa y América Latina* (Argentina, 1978) pp. 271-336; S.M. DIXON, "Vittone, Bernardo," in R.J. Van Vynckt, ed., *International Dictionary of Architects and Architecture*, 2 vols. (Detroit-London-Washington, D.C., 1993), I, pp. 962-963; C. BENEDETTO and P.I. BENEDETTO, *La luce ha mani e piedi: l'architettura di Bernardo Vittone, il romanico di Bernardo Chiaravalle e la modernità* (Savigliano, 2003); and W. Canavesio, ed., *Il voluttuoso genio dell'occhio: Nuovi studi su Bernardo Antonio Vittone* (Turin, 2005).

² On the business and legal activities of Vittone's father, see G. RODOLFO, "Notizie inedite dell'Architetto Bernardo Vittone," *Atti della Società Piemontese di Archeologia e Belle Arti* XV (1933), pp. 446-457, here pp. 447-448. Although Vittone's father was a member of the *petit bourgeoisie*, there were other Vittones who belonged to the nobility. A sepulchral vault once located in the parish church of Mathi bore an incised stone slab, dated 1610, recording the coat of arms of a Bernardus Vittone and his wife, Camilla Provana: "Hic in X.P.O. iacent. no. Bernardus Vittonus et Camilla Provana iugales et fundatores. M.VI.X.," published by OLIVERO, *Le opere*, p. 22; and CAVALLARI MURAT, *Lungo la Stura di Lanzo* (Turin, 1973), p. 261, ill. VI, 2, fig. 5. It is composed of an oval buckle capped by a helmet and divided into three parts featuring, on the right field, a standing lion with three stars and, on the left upper and lower bands, an alternating sequence of crowned towers and intersecting saplings with roots. The reference to a Bernardus Vittone would indicate that our Bernardo Vittone was himself a distant descendent of the founders of the sepulchre at Mathi, but there is no evidence that either Vittone or his father was a member of the nobility. Given Vittone's keen interest in, and extensive knowledge of, the accoutrements of nobility (e.g., he devoted more than 60 pages to the subject of heraldry in his first architectural treatise, *Istruzioni elementari per indirizzo dei giovani allo studio dell'architettura civile*, 2 vols. (Lugano, 1760), pp. 545-608), one would expect some reference to a title of nobility had there been occasion to boast of one. But in neither his treatise, nor his other writings, is there any mention of it. Nor is there any reference to the 1610 coat of arms of Bernardus Vittone.

³ A short document of 17 April 1716, published by POMMER, *Eighteenth-Century*, p. 260, § 3, indicates that Vittone's father had already died by that year. From another document, Giuseppe Nicola's notarized will drawn up on 7 June 1705, also published by Pommer (IBID., p. 259, § 2), we learn that Vittone had two sisters, Clara Francesca, and Cristina Maria Barthelma, four stepsisters, Francesca Maria, Giovanna Maria Theresa, Rosa Caterina, and Laura Margherita, and two stepbrothers, Giovanni Battista Francesco and Matteo Filiberto. On Vittone's family, see also W. CANAVESIO, "Storia di famiglia. la giovinezza di Bernardo Antonio Vittone," in idem., ed., *Il voluttuoso genio*, pp. 13-33.

especially close.⁴ Vittone was on less cordial terms with his other relatives, having brought numerous lawsuits against members of both his immediate and extended family, including one, filed jointly with Matteo Filiberto, against his stepsister, Laura Margherita.⁵

Members of Vittone's family were pious; three of his stepsisters became nuns,⁶ and Matteo Filiberto served as a canon and theologian in the Cathedral of San Giovanni in Turin.⁷ Vittone himself was devout, to judge from the religious paintings and books that filled his house (many of which he inherited from Matteo Filiberto).⁸ Evidence of Vittone's piety is also found in his published writings. For example, he did not dedicate either one of his two architectural treatises to a secular patron or a temporal ruler, as was customary practice at the time, but to a sacred one. The first treatise, *Istruzioni elementari per indirizzo dei giovani allo studio dell'architettura civile* (1760), is dedicated to the Infinite Majesty of the Most High Supreme God, and the

⁴ Vittone entrusted Matteo Filiberto with his affairs when he went to study in Rome during the early 1730s, and upon Matteo Filiberto's death in November 1762, Vittone became the sole heir to his estate; see RODOLFO, "Notizie inedite," p. 448.

⁵ The conflict appears to have involved disputes over their inheritance; see IBID., p. 448.

⁶ Giovanna Maria Theresa and Rosa Caterina were nuns in the convent of Santa Chiara in Turin, and Francesca Maria was a nun in the convent of Santa Chiara in Cavallermaggiore; see POMMER, *Eighteenth-Century*, p. 259, § 2.

⁷ IBID., p. 260, § 3.

⁸ Vittone's books and furnishings are recorded in the inventory of his estate drawn up by his heirs in October 1770, currently conserved in the Archivio di Stato di Torino (sezioni riunite, *Insinuazione di Torino*, 1770, libro 2, n. 463), and published in an imprecise form and with some errors by OLIVERO, *Le opere*, pp. 28-30, and PORTOGHESI, *Bernardo Vittone*, pp. 237-253. According to CAVALLARI MURAT, "L'architettura sacra," p. 35, Vittone's religiosity was a potent factor that found expression in his work, much in the same way that Borromini's religiosity informed his architecture. See also T. CHIUSO, *La Chiesa in Piemonte dal 1793 ai giorni nostri* (Turin, 1887), a source I was unable to consult, but cited in CAVALLARI MURAT, "L'architettura sacra," p. 36: "...architetto fornito di molto buon gusto e di una certa grazia che rendono i suoi lavori assai piacevoli mentre il suo spirito di pietà conferiva a dare ai medesimi un'impronta religiosa."

second one, *Istruzioni diverse concernenti l'ufficio dell'Architetto Civile* (1766), to the Grand Virgin and Mother of God, Most Holy Mary.⁹ Vittone never married but lived alone in the Casa Ormea with only a maid and a manservant, readily passing "for one of those provincial savants who, engrossed in his work, comes to live the lay equivalent of a priest's life."¹⁰

Like his father, Vittone was a shrewd businessman who increased his income through the lending of money, a practice that involved him in numerous lawsuits, including many brought against members of his own family.¹¹ Vittone's penchant for usury and litigation reveals something of a mean and stingy character,¹² so too his ill treatment of architectural assistants, several of whom he held in his employ for many years without pay.¹³ In

⁹ VITTONI, *Istruzioni elementari*, Title Page: "...dedicate alla Maestà Infinita di Dio Ottimo Massimo..."; IDEM., *Istruzioni diverse concernenti l'ufficio dell'architetto civile*, 2 vols. (Lugano, 1766), Title Page: "...dedicate alle Gran Vergine, e Madre di Dio Maria Santissima..."

¹⁰ POMMER, *Eighteenth-Century*, p. 107. Vittone's two servants are mentioned in the inventory of Vittone's estate; see PORTOGHESI, *Bernardo Vittone*, p. 237.

¹¹ Vittone lent money to his landlord, the Marchese d'Ormea, and even to members of his own family. In 1756 he lent a sum of 3,317 lire to relatives living in Mathi, Giacinto and Giuseppe Maria Vittone, and later, in 1761 and 1762, he initiated lawsuits to recover his loan. On Vittone's lawsuits, see OLIVERO, *Le opere*, pp. 24, 30; and RODOLFO, "Notizie inedite," p. 448.

¹² R. WITTKOWER, *Art and Architecture in Italy 1600 to 1750* (Harmondsworth, 1958; 3rd rev. ed., 1982), p. 378, note 64. For a different view, see POMMER, *Eighteenth-Century*, who takes issue with this negative assessment of Vittone's character, reasoning on p. 107 that "what seems temperamental in his actions was probably normal enough for his upbringing and position," and on p. 110 that "Vittone was doing what surely has always been common procedure among small and hard-pressed businessmen."

¹³ In 1773 Giovanni Battista Galletto, an assistant who had worked for Vittone for twelve years from 1758 until 1770, presented a petition for payment to Vittone's heirs who agreed to reimburse him 1500 lire. Another assistant, Giacomo Maria Contini, who, from 1767 until 1770, had served Vittone as an estimator, measurer, and surveyor, also petitioned Vittone's heirs for payment of unpaid wages. In his petition Contini explained that he had not pressed Vittone himself for payment for fear of provoking Vittone's wrath. Two years after receiving Contini's petition, Vittone's heirs agreed to pay him 700 lire for his work. On Galletto and Contini's petitions to Vittone's heirs, see RODOLFO, "Notizie inedite," pp. 449-453. See also POMMER, *Eighteenth-Century*, p. 262, § 2, who publishes a document of 6 December 1773 concerning a dispute among Vittone's heirs.

addition to his professional and business activities, Vittone devoted himself to public service, presiding as a decurian (city council member) of Turin during the last decade of his life, an office that charged him with the frequent administration of civic engineering and architectural projects.¹⁴

Apprenticeship and Early Practice

Vittone almost certainly was introduced to the architectural profession by his maternal uncle, Gian Giacomo Plantery (1680-1756), an architect and engineer whose architectural importance in the Italian Piedmont during the early decades of the eighteenth century was eclipsed only by that of Filippo Juvarra (1678-1736).¹⁵ Plantery is best known for his palaces in Turin, grandiose piles remarkable for their innovative vaulting and scenographic effects.¹⁶ Although documentation for Vittone's connection to Plantery's

¹⁴ Vittone was elected decurian, 2nd class, of the city of Turin on 31 December 1760 and held this office until his death ten years later; see OLIVERO, *Le opere*, pp. 37-38. In this respect Vittone followed the example of his uncle, Plantery, who himself had been a decurian and was actively engaged in the civic and judicial administration of Turin for a period of more than forty years, especially with commissions involving the construction of urban buildings, bridges, and roads. On Plantery's communal and civic service, see IDEM., *Il Palazzo Cavour in Torino* (Turin, 1939), p. 22; and A. CAVALLARI MURAT, "Gian Giacomo Plantery, architetto barocco," *Atti e rassegna tecnica della Società degli Ingegneri e degli Architetti di Torino* n.s. XI:7 (July 1957), pp. 313-346, here p. 314.

¹⁵ Vittone's mother, Francesca Maria Comune, was the sister of Plantery's first wife, Cristina Maria Comune. On the familial ties between Vittone and Plantery, see OLIVERO, *Il Palazzo Cavour*, pp. 21-25.

¹⁶ The most comprehensive treatment of Plantery and his architecture is still CAVALLARI MURAT, "Gian Giacomo Plantery," pp. 313-346, but see also IDEM., "Alcune architetture piemontese del settecento in una raccolta di disegni del Planteri, del Vittone e del Quarini," *Torino* XXI:5 (May 1942), pp. 3-7; A.E. BRINCKMANN, *Theatrum Novum Pedemontii: Ideen, Entwürfe und Bauten von Guarini, Juvarra, Vittone wie anderen bedeutenden Architekten des piemontesischen Hochbarocks* (Düsseldorf, 1932), p. 59, nos. 154-155, p. 81, nos. 276-279; C. BRAYDA, L. COLI, and D. SESIA, "Ingegneri e architetti dei Sei e Settecento in Piemonte," *Atti e rassegna tecnica della Società degli Ingegneri e degli Architetti di Torino* n.s. XVII:3 (March 1963), pp. 73-173, here p. 128; N. CARBONERI, "Architettura," in Viale, ed., *Mostra del Barocco*, I, pp. 43-44; G.L. MARINI, *L'architettura barocca in Piemonte—La Provincia di Torino* (Turin, 1963), pp.

workshop is lacking, the close familial ties between the two would suggest some sort of early professional association.¹⁷ Vittone's apprenticeship under Plantery is indicated as well by the numerous commissions that both architects shared. For example, there is the Sanctuary of Sant'Ignazio near Lanzo for which Plantery designed the church (1722-32) and Vittone designed the high altar positioned in the center (1725-27; Figure 1.1).¹⁸ Vittone appears

126-129; A. BAUDI DI VESME, *Schede Vesme. L'arte in Piemonte dal XVI al XVIII secolo*, 4 vols. (Turin, 1963-68), III, pp. 839-840; and F. MARESCOTTI and F. TARDITO, "Gian Giacomo Plantery (1680-1756): ingegnere-architetto della città di Torino e della aristocrazia sabauda in epoca tardobarocca," Thesis, Politecnico di Milano, Milan, 1997-98, a source I was unable to consult. The best account in English is H.A. MILLON, "Plantery, Gian Giacomo," in Placzek, ed., *Macmillan Encyclopedia of Architects*, III, p. 438.

¹⁷ Plantery would have been inclined to give Vittone professional instruction since none of his own children — Giovanni Amedeo Giuseppe, Giuseppe Maria, Ludovico Francesco Giuseppe, Maurizio Giuseppe, Clara Francesca, and Angelina Catterina — followed him into the architectural profession; see CAVALLARI MURAT, "Gian Giacomo Plantery," p. 313, note 2. The assessment that Plantery was Vittone's first teacher of architecture is accepted by a number of scholars, including CAVALLARI MURAT, "Alcune architetture," p. 3; IDEM., "L'architettura sacra," p. 38; H.A. MILLON, "Alcune osservazioni sulle opere giovanili di Bernardo Antonio Vittone," *Bollettino della Società Piemontese di Archeologia e Belle Arti* XII-XIII (1958-59), pp. 144-153, here p. 151; and P. PORTOGHESI, "Metodo e poesia nell'architettura di Bernardo Antonio Vittone," *Bollettino della Società Piemontese di Archeologia e Belle Arti* n.s. XIV-XV (1960-61), pp. 99-114, here p. 100.

¹⁸ VITTONI, *Istruzioni diverse*, pp. 194-195, pl. 93. The entire sanctuary is attributed to Vittone by CHIUSO, *La Chiesa in Piemonte*, a source that I was unable to consult, but see OLIVERO, *Le opere*, p. 106. However, this is unlikely since, as CAVALLARI MURAT, "Gian Giacomo Plantery," p. 321, points out, Vittone would have been too young at the time of the church's commission to have been entrusted with the design. Moreover, while Vittone describes and illustrates the high altar in *Istruzioni diverse* (p. 194, pl. 93), he says absolutely nothing about the church. This silence is telling for had the design for the church been his, Vittone almost certainly would have mentioned it in his treatise. CAVALLARI MURAT, "Gian Giacomo Plantery," p. 321, note 15, and p. 335, concludes that the church is primarily the work of Plantery, a hypothesis subsequently accepted by PORTOGHESI, *Bernardo Vittone*, p. 219. See also D. PROLA and E. PEYROT, *Architetture Barocche in Piemonte: 120 spazi sacri / Baroque Architecture in Piemonte: 120 Sacred Spaces*, Introduction by A. Corboz (Florence, 1988), un-numbered page (listing under Pessinetto), who also sees Plantery's hand behind the design for the church as indicated by its axes of transversal symmetry, an arrangement that is comparable to that in Plantery's two churches of the Pietà (1708) and the Assunta (1708-09) both at Savigliano. On the church of Sant'Ignazio and Vittone's altar, see also M. MAROCCO, *Il santuario di S. Ignazio di Loiola presso Lanzo* (Turin, 1870), pp. 61-70, a source I was unable to consult; A. MONTI, S.J., *La Compagnia di Gesù nel territorio della Provincia Torinese*, 5 vols. (Chieri, 1914), pp. 185-194, another source I was unable to consult; S. SOLERO, *Il santuario di Sant'Ignazio presso Lanzo Torinese* (Pinerolo, 1954), another source I was unable to consult; G. TUNINETTI, *Il santuario di Sant'Ignazio presso Lanzo. Religiosità, vita ecclesiale e devozione (1622-1991)* (Pinerolo, 1992), pp. 63-64, 72; and W. CANAVESIO, "Inediti vittoniani," *Bollettino della Società Piemontese di Archeologia e Belle Arti* n.s. XLVIII (1996), pp. 169-192, who publishes a

to have worked also with his uncle on an earlier commission, the Palazzo Saluzzo Paesana in Turin (1715-22), since one of its stairwells is illustrated in *Istruzioni elementari*, a likely indication of Vittone's hand in the stairwell's design.¹⁹ Then there were several commissions initiated by Plantery during the 1720s and completed later by Vittone, namely the convent of Santa Chiara at Bra, which Plantery enlarged and renovated in 1722, and the accompanying church, which Vittone designed and erected twenty years later.²⁰ In addition, the parish church of Santa Maria dell'Assunta at Riva di Chieri was originally begun by Plantery during the mid-1720s and completed by Vittone decades later.²¹

contract of 1748 between the Jesuits and Ignazio Perrucca for the sculpture of Vittone's altar.

¹⁹ VITTONI, *Istruzioni elementari*, p. 455, pl. 79, no. 7. The stairwell is identified as such by CAVALLARI MURAT, "Gian Giacomo Plantery," p. 329, fig. 9 on p. 317. See also IDEM., ed., *Forma urbana ed architettura nella Torino barocca*, 3 vols. (Turin, 1968), I, pp. 656, 661, fig. 156. Still, Vittone was only 18 years of age when the palace was completed and he could hardly have contributed much to its overall design. See also MARINI, *L'architettura barocca*, p. 128, who argues that the Palazzo Saluzzo Paesana profoundly influenced the young Vittone, who discovered in it numerous and elaborate novelties and inventions which he later applied to his own work. There is another staircase, this one for the Jesuit church of Santi Martiri in Turin datable to 1718, that Vittone mentions and illustrates in *Istruzioni diverse*, p. 151, pl. 19: "...una Scala esistente nel Collegio de' MM. RR. PP. della Compagnia di Gesù in Torino." According to B. SIGNORELLI, "Per i Santi Martiri una chiesa protagonista," in A. Griseri and R. Rocca, ed., *Torino. I percorsi religiosità*, Archivio Storico della Città di Torino (Turin, 1998), pp. 131-157, here p. 153, this reference is indicative of Vittone's authorship of the design. Signorelli points out, however, that Vittone would have been only 14 years old at the time, and that if he did design the staircase he would have done so as a very young apprentice to either Plantery or Juvarra.

²⁰ See CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 43, no. 73.

²¹ Plantery's original design of 1725 was completed up to the impost blocks that were covered by a provisional wooden roof. In 1761 the town council of Riva decided to complete the church, but by that time Plantery had died and Vittone was commissioned to draw up his own designs for the nave and presbytery vaults. This new construction did not begin until 1766, and the church was finally completed in 1792 under the direction of another architect, Francesco Valeriano Dellala di Beinasco. On the Assunta at Riva di Chieri, see E. OLIVERO, "La Parrocchia di Riva di Chieri," *Bollettino della Società Piemontese di Archeologia e Belle Arti* IX:1-2 (January-June 1925), pp. 19-21; A. CAVALLARI MURAT, *Antologia monumentale di Chieri* (Turin, 1969), pp. 100-107; and P. PENNAZIO, "Bernardo Vittone e la parrocchiale dell'Assunta di Riva presso Chieri," *Bollettino Storico-Bibliografico Subalpino* XCIII:2 (1995), pp. 695-710.

Plantery's influence on his nephew's architectural formation was most decisive in vault design.²² Plantery's palace vaults, in particular the atrium vaults in the Palazzo Saluzzo Paesana (1715-22) and the Palazzo Cavour (1729), are characterized by the same grace and sense of levity, and the same three-dimensionally curved arch, that would also come to characterize Vittone's openwork domes.²³ As Plantery's apprentice, Vittone would have had occasion to oversee the erection of his uncle's vaults and thereby equip himself with a mastery of the technical properties of vault construction. For like his uncle, Vittone considered himself to be first and foremost an engineer, preferring the title of *ingegnere* to that of *architetto*.²⁴

Whatever the nature of their professional affiliation, relations between Vittone and his uncle appear to have become strained by the time of the

²² For a different view, see POMMER, *Eighteenth-Century*, p. 108, who concludes that while Plantery may have "anticipated some of Vittone's interests, [...] his undistinctive style left little definable mark on his nephew's."

²³ On Plantery's atrium and stairwell vaults, see P.R. DEVILLE, *Il Palazzo Saluzzo Paesana* (Turin, 1913), a source I was unable to consult; OLIVERO, *Il Palazzo Cavour*, pp. 9-11; CAVALLARI MURAT, "Gian Giacomo Plantery," pp. 332-346, figs. 39-41 on pp. 339-340; IDEM., ed., *Forma urbana*, I, pp. 109, 658-661; M. OREGLIA, "Una volta planteriana in via del Carmine," *Bollettino della Società Piemontese di Archeologia e Belle Arti* n.s. XIV-XV (1960-61), pp. 92-98; S.J. WOOLF, "Some Notes on the Cost of Palace Building in Turin in the 18th Century," *Atti e rassegna tecnica della Società degli Ingegneri e degli architetti di Torino* n.s. XV:9 (September 1961), pp. 299-306; IDEM., "Studi sulla nobiltà piemontese nell'epoca dell'assolutismo," *Memorie dell'Accademia delle Scienze di Torino* IV:5 (1963), pp. 1-243, here pp. 26-29; CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 44, nos. 75-77, pls. 67-a, 67-b, 68; B. PECCHENINO, "Palazzo Saluzzo Paesana in Torino e l'attività di Giovanni Giacomo Plantery," Thesis, Politecnico di Torino, 1992-93, a source I was unable to consult; A. GRISERI, ed., *Il Palazzo Saluzzo Paesana* (Turin, 1995); and E. PICCOLI, "Strutture voltate composte nell'architettura civile piemontesi del XVIII secolo: le volte 'planteriane,'" *Palladio* XII:23 (1999), pp. 87-100.

²⁴ See H.A. MILLON, "La formazione piemontese di B. Vittone fino al 1742," in Viale, ed., *Bernardo Vittone e la disputa*, I, pp. 443-456, here p. 456. Late in his career Vittone penned a technical treatise on the curvature and construction of vaults. The treatise, never published and now lost, is cited in a document of 6 December 1773 by POMMER, *Eighteenth-Century*, p. 262, § 2. See also R. WITTKOWER, "Vittone's Domes," in *Studies in the Italian Baroque: The Collected Essays of Rudolf Wittkower* (London, 1975), pp. 211-222, 295-296, here p. 213 [originally published as "Le cupola del Vittone," in Viale, ed., *Bernardo Vittone e la disputa*, I, pp. 17-32].

latter's death in 1756,²⁵ at least to judge from Plantery's last will and testament in which no mention is made of Vittone, and in which Plantery's mathematical instruments, books, and architectural drawings were bequeathed not to Vittone but to Plantery's own son, Giovanni Amedeo Giuseppe, a physician by training.²⁶

Vittone appears to have completed his apprenticeship under Plantery during the mid to late 1720s, about which time he became apprenticed to Filippo Juvarra, whom Vittone mentions and praises several times in his architectural treatises.²⁷ In one passage Vittone specifically names Juvarra as his master.²⁸ Indication of Vittone's association with Juvarra's workshop is

²⁵ From a document in the parish archives of San Dalmazzo that records Plantery's death, published by OLIVERO, *Il Palazzo Cavour*, pp. 21-22, we learn that Plantery was about 77 years old when he died on 26 April 1756 (the architect's certificate of birth having been lost). This would suggest that Plantery was born around 1680, a date that is supported by a second document, a census drawn up in August 1705, and again published by Olivero (IBID., p. 21), which tells us that Plantery was 25 years of age at that time.

²⁶ On Plantery's will, drawn up on 25 July 1746, see IBID., pp. 24-25. See also W. CANAVESIO, "Bernardo Antonio Vittone a Fossano nella cronaca di Giovanni Battista Dray," in G. Gullino and C. Morra, eds., *Fossano. Pagine di storia e arte* (Cuneo, 1998), pp. 127-147, here pp. 130-131, note 9, who, in addition to publishing excerpts of Plantery's will and testament, publishes excerpts of the codicil of 3 March 1755 in which Plantery bequeathed all his clothing to his son, Giovanni Amedeo Giuseppe. The testament makes clear that the instruments, books, and drawings that Plantery bequeathed to his son applied only to those objects which were found in Plantery's house at the time of his death. Canavesio hypothesizes that Plantery, perhaps on the basis of a verbal agreement, had designated Vittone as the recipient of objects from his studio not covered by the codicil.

²⁷ VITTORE, *Istruzioni elementari*, p. 348: "...a cui rassomiglianza l'Abbate Tuvara [sic] nella facciata di Santa Cristina in Torino..."; p. 391: "...che l'Abbate Juvara [sic] dispose nella facciata del magnifico Palazzo di Madama Reale in Torino."; p. 528: "...Celebre Architetto di felice memoria l'Abbate Tuvara [sic]..."; p. 606: "D'alcune Regole geometriche dell' Abbate Filippo Juvara [sic] per disegnare in bella proporzione le Targhe per ogni grado di Persone."; IDEM., *Istruzioni diverse*, p. 154: "...col disegno, ed assistenza del celebre già più volte mentovato Architetto l'Abate Juvara [sic]."

²⁸ IBID., p. 285: "Celebre Architetto mio Maestro l'Abbate Juvara [sic]." According to MILLON, "Alcune osservazioni," p. 148, this statement is more than a manner of expression, but a strong indication of a close contact between Vittone and Juvarra before Vittone went to study in Rome in 1732. On the relation between Vittone and Juvarra, see also W. OECHSLIN, *Bildungsgut und Antikenrezeption im frühen Settecento in Rom: Studien zum Römischen Aufenthalt Bernardo Antonio Vittones* (Zürich, 1972), p. 18, note 27 on p. 42.

given by several of Vittone's drawings conserved in the Musée des Arts Décoratifs in Paris — one, a copy of Juvarra's unexecuted façade for Santa Maria del Carmine in Turin and, another, a design resembling Juvarra's projects for the Sacristy of St. Peter's.²⁹ Vittone also published several versions of a church project derived from Juvarra's two-bay project for the Carmine.³⁰ In addition, Vittone is reported by Scipione Maffei, Juvarra's biographer, to have rendered a drawing of Juvarra's unfinished project for the Palazzo Madama in Turin.³¹

Exactly how and when Vittone became associated with Juvarra's workshop is uncertain — perhaps Plantery negotiated the arrangement with Juvarra during the mid to late 1720s. What is certain is that Vittone entered Juvarra's workshop before 1730 and not afterwards as is sometimes asserted.³² Vittone's early association with Juvarra's workshop has been confirmed by Rudolf Wittkower who detects a strong Juvarreresque character in Vittone's drawing of *coretti* in the Oratory of San Giovanni Decollato (now the Misericordia) in Turin, a drawing dated by Vittone's own inscription to 13 April 1728.³³ Vittone's early association with Juvarra is also confirmed by a

²⁹ Paris, Musée des Arts Décoratifs, II, nos. 149, 178, 203.

³⁰ VITTORE, *Istruzioni diverse*, pp. 185-186, pls. 75-77. See also PORTOGHESI, *Bernardo Vittone*, p. 145, fig. LV; and POMMER, *Eighteenth-Century*, pp. 108, note 11 on pp. 121-122.

³¹ S. MAFFEI, "Elogio del Signor Abate D. Filippo Juvara Architetto," in *Osservazioni letterarie che possono servire di continuazione al Giornale de' Letterati d'Italia*, III, article 6 (Verona, 1738), pp. 103-203 [reprinted in L. ROVERE, V. VIALE, and A.E. BRINCKMANN, *Filippo Juvara. Regesto della vita e della opere* (Milan, 1937), pp. 18-21; and in V. VIALE, ed., *Mostra di Filippo Juvara, architetto e scenografo* (Messina, 1966), pp. 18-21].

³² According to POMMER, *Eighteenth-Century*, p. 108, Vittone did not join Juvarra's workshop until after he had left for Rome in 1731. See also PORTOGHESI, *Bernardo Vittone*, p. 86.

³³ Paris, Musée des Arts Décoratifs, II, no. 230. See R. WITTKOWER, "Vittone's Drawings in the Musée des Arts Décoratifs," in A. Blunt, *Studies in Renaissance and Baroque Art Presented to Anthony Blunt on his 60th Birthday* (London and New York, 1967), pp. 165-172, here p. 168, fig.

drawing that Vittone made of a grand park, identified by Vittoria Moccagatta as belonging to Juvarra's garden project for the Villa Mansi at Segromigno di Lucca (1725).³⁴ There is also Juvarra's Altar of the Annunciation in the Superga (1728), which may have been designed by Vittone himself since he illustrates two altar designs in *Istruzioni diverse* (Figure 3.50) that are closely modeled after it.³⁵

Whatever the circumstances surrounding Vittone's association with Juvarra's workshop, it is clear that Juvarra's illusionistic and scenographic architecture became the point of departure for Vittone's own remarkable work. Juvarra's bold experiments with open structure in the Chapel of Sant'Uberto at Venaria Reale (1715-28), Sant'Andrea at Chieri (1728-33, demolished 1803), and Santa Maria del Carmine in Turin (1732-36), and in his unexecuted projects for San Raffaele (*ca.* 1724) and the Duomo Nuovo (1728-30) both in Turin, formed the foundation of Vittone's own experiments with openwork architecture.

Vittone's years of apprenticeship afforded him a thorough introduction to the principles of illusionistic design. From Plantery he learned to construct heavy masonry vaults that are billowing and airy in appearance. From Juvarra he learned to design domes that are perforated and open. From both

6; and CARBONERI/VIALE, eds., *Bernardo Vittone architetto*, p. 16, no. 4, fig. 2, who, while proffering no conclusions regarding Vittone's involvement with Juvarra's workshop, note the importance of the drawing's early date for Vittone's decorative language. See also POMMER, "A Note on Santa Marta in Agliè," in Viale, ed., *Guarino Guarini e l'internazionalità*, II, pp. 385-390, here p. 385, who reverses his previous position (*Eighteenth-Century*, p. 108) and accepts Wittkower's conclusion; and OECHSLIN, *Bildungsgut*, p. 141, note 32 on p. 187.

³⁴ V. MOCCAGATTA, "La juvarriana Villa Morra di Lavriano a Villastellone," in *Studi juvarriani* (Turin, 1985), pp. 367-389, here p. 376. See also CARBONERI/VIALE, eds., *Bernardo Vittone architetto*, p. 17, no. 9, fig. 8, who identify the drawing as a precocious work by Vittone produced before he departed Turin for Rome.

³⁵ VITTORE, *Istruzioni diverse*, p. 195, pl. 94 (left and center figures).

masters Vittone learned to build arches that curve in three dimensions, and from both he learned to design a scenographic architecture incorporating perspectival motifs.

By 1730 Vittone had completed his apprenticeship under Juvarra and set up his own practice. On 21 July 1730 he submitted a drawing for a wooden fence and gate to be constructed behind the unfinished Palazzo Carignano in Turin separating the palace courtyard from the gardens that stretched towards the Po River, together with a set of signed instructions specifying how the construction was to proceed.³⁶ This commission, as Henry Millon first observed, is significant for several reasons: it establishes Vittone's early ties to the architecture of Guarino Guarini (1624-83), it proves that Vittone had established an independent practice prior to having enrolled in the Accademia di San Luca in 1731, and it confirms that Vittone's practice had achieved sufficient merit by that early date to have secured a royal commission (albeit a minor one, and one which, in all likelihood, owed much to Juvarra's decisive standing at court).³⁷

It was also during 1730, while designing the wooden fence at the Palazzo Carignano, that Vittone submitted a design for the parish church of Santa Maria della Neve at Pecetto (1730-39).³⁸ Unlike most of his later

³⁶ The specifications are signed, "B.A. Vittone, Arch." Eight days later, on 29 July, Vittone was paid for his design, calculations, and instructions. See MILLON, "Alcune osservazioni," pp. 144-146, 152 (Appendix I), figs. 133-134, who publishes Vittone's drawing of the fence, his set of instructions of 21 July 1730, and the series of payments. See also IDEM., "Vittone," *Architectural Review*, p. 98; and CARBONERI/VIALE, eds., *Bernardo Vittone architetto*, p. 16, no. 6.

³⁷ MILLON, "Alcune osservazioni," pp. 144, 146, 151.

³⁸ Santa Maria della Neve was commissioned on 23 April 1730 at which time the city council of Pecetto decided to select an engineer "expert in the fabrication of churches." On 7 May the council summoned Vittone to take measure of the site. On 3 August Vittone issued an order to begin work. One year later, while construction continued, Vittone left for Rome. By the

churches, it is longitudinal in plan with the nave covered by a barrel vault and flanked on either side by three chapels.³⁹ Vittone describes the church in *Istruzioni diverse* as having a very simple and commodious design in keeping with its parochial use and the character of its site.⁴⁰ It belongs to the first of four basic church types established by Vittone, namely the church with a simple nave (*Chiesa a semplice Nave*).⁴¹ Vittone's design for Santa Maria della Neve is notable for its allusions to the work of Juvarra, and to that of Juvarra's teacher, Carlo Fontana (1638-1714). For example, the façade features a slight concavity in plan and a circular window positioned above the portal in a manner that echoes the façades of Juvarra's Santa Cristina in Turin (1715-28),⁴²

time he returned in 1733, the project was being directed by other hands and Vittone no longer had any involvement with it. Construction dragged on by fits and starts until 1739 when the church was consecrated. Documents pertaining to the construction of the church are also published in N. CARBONERI, "Appunti sul Vittone," *Quaderno dell'Istituto di Storia dell'Architettura* 55-60 (1963), pp. 59-74; and POMMER, *Eighteenth-Century*, pp. 263-265. On Santa Maria della Neve, see also C.F. CAPELLO, *Pecetto torinese: la sua storia, i suoi monumenti, la sua collina* (Chieri, 1962), pp. 187-219, pls. XLVI-XLVII; N.M. CUNIBERTI, *Storia di Pecetto torinese: paese delle ciliegie* (Pinerolo, 1962); and C. BERTOLOTTI, "Il palazzo di Bernardo Antonio Vittone," in M. Marchiando Pacchiola, ed., *Pinerolo. La Collezione Civica d'arte di Palazzo Vittone* (Pinerolo, 1994), pp. 8-15.

³⁹ POMMER, *Eighteenth-Century*, p. 108, note 9 on p. 121, suggests that this arrangement is derived from the parish church of Santi Pietro e Paolo in Pianezza (1727-29) attributed variously to Juvarra or to one of his students or collaborators; see also C. BRAYDA, "Notizie e rilievi di alcune chiese barocche piemontesi," *Bollettino Storico-Bibliografico Subalpino* XLIII (1941), pp. 256-266, here p. 263, fig. 96.

⁴⁰ VITTONI, *Istruzioni diverse*, p. 179, pl. 58: "Ella è di maniera, come vedesi, assai semplice, e comoda, essendosi adattata, piuttosto che ad altro, agli usi Parrocchiali, ed alla soggezione, che si aveva de' siti, a' quali ella è coerente..."

⁴¹ *IBID.*, p. 469, pl. 80: "Quattro sono le principali maniere, in cui si formano le Chiese, cioè a semplice Nave, a Tempio, a Croce Greca, ed a Croce Latina." The plan of Vittone's church at Pecetto is in fact practically identical with the plan of the *Chiesa a semplice Nave* that Vittone illustrates in his treatise.

⁴² The resemblance to Santa Cristina is plain enough in the built version of Vittone's façade, but is even more striking in his original design; see CARBONERI, "Appunti," p. 69, fig. 29. Vittone's esteem for the façade of Santa Cristina is explicitly stated by the architect in *Istruzioni elementari*, p. 348: "...a cui rassomiglianza l'Abbate Tuvara [sic] nella facciata di Santa Cristina in Torino collocò il glorioso nome di S.A.R. Maria Gioanna Battista, che nel 1716 con questa vaga facciata fece un bellissimo compimento alla Magnifica Piazza di S. Carlo eretta dalla grande memoria di Carlo Emanuele II."

and, more distantly, Fontana's San Marcello al Corso in Rome (1682-83).⁴³ The first echo is proof once again of Vittone's early association with Juvarra's workshop, the second is proof of his assimilation of aspects of Fontana's architecture before he left Turin for Rome.⁴⁴ Vittone's church also incorporates light chambers above the side chapels (Figure 1.2) in anticipation of those erected above the side chapels of Juvarra's Carmine (1732-36).⁴⁵ Vittone originally envisioned a lowering of the sills of the clerestory windows (Figure 1.3), a solution that would have increased the illumination of the interior, and one that, in its eroded mass and emphatic verticality, again anticipates the side chapels of the Carmine.⁴⁶ It is here then in the parish church of Pecetto, despite its longitudinal plan, that Vittone introduced in embryonic form the principal themes of his mature architecture, themes that

⁴³ The debt that Vittone's design owes to Fontana's façade of San Marcello al Corso is discussed by PORTOGHESI, *Bernardo Vittone*, p. 83.

⁴⁴ For a different view, see POMMER, *Eighteenth-Century*, p. 87, note 39 on p. 95, who argues that the structure and ornament of Vittone's church at Pecetto do not indicate that Vittone had as yet come into close contact with Juvarra's workshop; and MILLON, "La formazione," p. 453, who holds that Vittone's design returns to the main current of ecclesiastical "dialectical" architecture of Piedmont, and reveals few traces of Juvarra's influence.

⁴⁵ Turin, Museo Civico, Vandone Collection. See PORTOGHESI, *Bernardo Vittone*, pl. 66; and CARBONERI/VIALE, eds., *Bernardo Vittone architetto*, fig. 6.

⁴⁶ Turin, Museo Civico, Vandone Collection. See CAVALLARI MURAT, "Alcune architetture," p. 4, fig. 3; CARBONERI, "Appunti," p. 71, figs. 30-31; IDEM., "Architettura," in *Mostra del Barocco*, I, p. 57, no. 136, pl. 132-a; PORTOGHESI, *Bernardo Vittone*, p. 83, pl. 65; and CARBONERI/VIALE, eds., *Bernardo Vittone architetto*, p. 17, no. 8, fig. 4. The extension of the window sills to the entablature of the storey below occurs only in Vittone's version of the design as recorded in the sheets conserved in the Vandone Collection in the Museo Civico in Turin (named after Count Antonio Vandone of Cortemilia in whose possession the collection of drawings was held for many years). It does not occur in the version of the design as recorded in his unpublished treatise, "L'architetto civile volume originale delle opere del signor Bernardo Vitone [sic] insigne allievo dell'Accademia in Roma del MDCCLX," (pl. 58), conserved in the Biblioteca Reale in Turin, nor in *Istruzioni diverse* (pl. 58), nor in the version of the design that was actually built. The extension of the clerestory window into the entablature zone below is a solution that Vittone repeated in two other church projects, one for Santo Stefano dei Padri Servi di Alessandria and the other for Santa Croce at Chieri; see CARBONERI/VIALE, eds., *Bernardo Vittone architetto*, p. 22, no. 36, fig. 51; p. 38, no. 99, fig. 154.

also characterize Juvarra's architecture, namely the lightening of structure, the opening up of the mural mass, and the vertical continuity of line.

It was in 1730 that Vittone received yet another commission, the third one that year, to renovate and enlarge the medieval Palazzo Municipale at Bra (1730-32).⁴⁷ Vittone's design, limited primarily to the façade and the atrium, is a simplified version of the Palazzo Carignano in Turin, evidence again of Vittone's early interest in Guarini's architecture.⁴⁸ It is certain then that by the time Vittone departed Piedmont for Rome in 1731 to enroll in the Accademia di San Luca he had already established himself as a practicing architect who discharged both ecclesiastic and civic commissions, and who had begun to assimilate and master aspects of the works of Juvarra, Fontana, and Guarini.

Education and Training in Rome

The Accademia di San Luca

In late 1731 Vittone set off for Rome to enroll in the Accademia di San Luca where he studied until his return to Turin in April 1733.⁴⁹ Admittance to

⁴⁷ Vittone was charged with the commission on 5 July 1730 and he quickly drew up the design. On 26 July contractors were chosen but were soon dismissed. On 12 September, following the resolution of legal disputes involving the original contractors, the final contractors, D. Demartin and C.A. Ramelli, were selected and construction began. Construction was completed by August 1732, one year after Vittone had departed for the Accademia di San Luca in Rome. On the construction history of the Palazzo Municipale at Bra, see R. DELLAROSSA, "Il Palazzo Municipale di Bra," in R. Dellarossa and P.P. Faccio, eds., *Studi sull'architettura e le arti applicate a Bra* (Bra, 1986), pp. 13-36; and L. BOTTO, "Architettura," in E. Molinaro, ed., *Arte in Bra* (Bra, 1988), pp. 49-160, here pp. 134-137.

⁴⁸ On the Guarinesque character of the Palazzo Municipale, see C. BRAYDA, "Opere inedite di Bernardo Antonio Vittone," *Bollettino della Società Piemontese di Archeologia e Belle Arti* n.s. I:1-4 (1947), pp. 86-88, here p. 86, figs. 58-61; CARBONERI/VIALE, eds., *Bernardo Vittone architetto*, p. 25, no. 39, figs. 60-61; N. CARBONERI, "Guarini ed il Piemonte," in Viale, ed., *Guarino Guarini e l'internazionalità*, II, pp. 347-383; here p. 358, fig. 25; and H.A. MEEK, *Guarino Guarini and his Architecture* (New Haven and London, 1988), p. 158, fig. 158.

the Accademia was dependent upon acceptance by an accredited member there,⁵⁰ and since Juvarra was himself a celebrated member of the Accademia, and one who had taught there for several years during the first decades of the eighteenth century, it would appear that Vittone's admittance owed something to his master's academic standing and influence.⁵¹

Courses of study in architecture at the Accademia di San Luca included mathematics, plane and solid geometry, perspective, and architecture.⁵²

⁴⁹ On Vittone's arrival in Rome in 1731, see POMMER, *Eighteenth-Century*, pp. 108, 260, § 4. Vittone followed a long line of architects — Meo del Caprino da Settignano, Pellegrino Pellegrini, Asconio Vittozzi, Carlo di Castellamonte, Guarino Guarini, Filippo Juvarra, and Benedetto Alfieri — who practiced in Piedmont but who had received their training in Rome; see C. BRICARELLI, S.J., "L'influenza di Roma su l'architettura barocca in Piemonte," *La civiltà cattolica* LXXXI:4 (1930), pp. 209-223; A. RESSA, "L'architettura religiosa in Piemonte nei secoli XVII e XVIII," *Torino: Rassegna mensile della Città* XX:7 (July 1941), pp. 5-22, here p. 9; and MILLON, "Native Origins," pp. 675-678. On the architectural culture of Rome at the time of Vittone's arrival there, see S. BENEDETTI, "L'architettura dell'Arcadia: Roma 1730," in Viale, ed., *Bernardo Vittone e la disputa*, I, pp. 337-391; and J.A. PINTO, "Architecture and Urbanism," in E.P. Bowron and J.J. Rishel, eds., *Art in Rome in the Eighteenth Century* (Philadelphia, 2000), pp. 112-155. On Vittone and the Accademia di San Luca, see W. OECHSLIN, "Il soggiorno romano di Bernardo Antonio Vittone," in Viale, ed., *Bernardo Vittone e la disputa*, I, pp. 393-441; and IDEM., *Bildungsgut*, pp. 118-174. On the Accademia di San Luca during the early eighteenth century, see M. MISSIRINI, *Memorie per scrivere alla storia della romana Accademia di S. Luca fino alla morte di Antonio Canova* (Rome, 1823), a source I was unable to consult; V. GOLZIO, "L'Accademia di S. Luca come centro culturale e artistico nel '700," *Atti I Congresso Nazionale di Studi Romani* I (1929), pp. 749-767; *La Reale Insigne Accademia di S. Luca nella inaugurazione della sua nuova sede A. MCMXXXIV-XII* (Rome, 1934) another source I was unable to consult; P. MARCONI, A. CIPRIANI, and E. VALERIANI, eds., *I disegni di architettura dell'Archivio storico dell'Accademia di San Luca*, 2 vols. (Rome, 1974); C. PIETRANGELI, ed., *L'Accademia Nazionale di San Luca* (Rome, 1974); S.S. MUNSHOWER, ed., *Architectural Fantasy and Reality: Drawings from the Accademia Nazionale di San Luca in Rome, Concorsi Clementini 1700-1750* (University Park, 1982); H.A. MILLON, "Filippo Juvarra and Architectural Education in Rome in the Early Eighteenth Century," *Bulletin: The American Academy of Arts and Sciences* XXXV (1982), pp. 27-45; and IDEM., "Filippo Juvarra and the Accademia di San Luca in Rome in the Early Eighteenth Century," in H. Hager and S.S. Munshower, eds., *Projects and Monuments in the Period of the Roman Baroque* (University Park, 1984), pp. 12-24.

⁵⁰ On the conditions for acceptance to the Accademia di San Luca, see MILLON, "Juvarra and Architectural Education," p. 32; and IDEM., "Juvarra and the Accademia," p. 15.

⁵¹ On Juvarra's relation to, and association with, the Accademia di San Luca, see B. TAVASSI LA GRECA, "Il decennio romano di Filippo Juvarra," *Storia dell'arte* XLI (1981), pp. 21-30; MILLON, "Juvarra and Architectural Education," pp. 27-45; and IDEM., "Juvarra and the Accademia," pp. 12-24.

⁵² On the curriculum of the Accademia di San Luca in the early eighteenth century, see IDEM., "Juvarra and Architectural Education," pp. 34-37; and IDEM., "Juvarra and the Accademia," pp. 15-17.

Students of architecture were required to produce measured drawings of buildings in Rome as well as copies after drawings of previous masters.⁵³ A good part of Vittone's education consisted of copying such drawings, many of which were available at that time in the Accademia's archive.⁵⁴ In all likelihood, Vittone was instructed by Antoine Derizet (1685-1768), teacher of perspective and geometry and presumed author of the First Class competition in architecture of the *Concorso Clementino* of 1732.⁵⁵ Werner Oechslin credits

⁵³ For example, Juvarra was asked by his teacher at the Accademia di San Luca, Carlo Fontana, to measure and draw buildings by Michelangelo, and some of these drawings, rendered in 1704, still exist; see IDEM., "Juvarra and Architectural Education," pp. 29-30, 40; and IDEM., "Juvarra and the Accademia," pp. 14, 18.

⁵⁴ Vittone produced a number of drawings, today conserved in the Musée des Arts Décoratifs in Paris, that are copies after student projects submitted years earlier to the Accademia. For example, he copied the plan and elevation of Pompeo Ferrari's prize-winning project for the *Concorso Accademico* of 1694 (Paris, Musée des Arts Décoratifs, II, nos. 146, 148), the plan of Kaspar Barzanka prize-winning project for the First Class competition in architecture of the *Concorso Clementino* of 1704 (Paris, Musée des Arts Décoratifs, II, no. 144), and the façade elevation of Pietro Paolo Scaramella's prize-winning project for the Second Class competition in architecture of the *Concorso Clementino* of 1704 (Paris, Musée des Arts Décoratifs, II, no. 189); see WITTKOWER, "Vittone's Drawings," pp. 166-167, notes 20-21; OECHSLIN, "Il soggiorno," p. 399, notes 1-2, figs. 1-2; IDEM., *Bildungsgut*, p. 19, note 31 on p. 43, p. 138, notes 16-17 on pp. 185-186; HAGER, "The Accademia," p. 135, note 70 on p. 140; MUNSHOWER, ed., *Architectural Fantasy*, pp. 8-29; and G.R. SMITH, *Architectural Diplomacy. Rome and Paris in the Late Baroque* (New York and Cambridge, Mass., 1993), pp. 165-167, 210, figs. 108-109. Vittone continued this practice long after he had graduated from the Accademia, copying designs by the Roman architect, Gaetano Chiaveri (1689-1770) who in 1746 had been elected a member to the Accademia di San Luca. Vittone's drawings (Paris, Musée des Arts Décoratifs, II, nos. 149, 197, 203, 218) include several that are copies after Chiaveri's design for the Catholic Church of the Court in Dresden (1738-51); see WITTKOWER, "Vittone's Drawings," p. 166, note 18; and H.G. FRANZ, "Die Katholische Hofkirche in Dresden (Kathedrale St. Trinistatis) und die Rückkehr zum Barock. Vorgeschichte, Pläne, Vorentwürfe 1736-38," *Das Münster* I (1994), pp. 21-31. Vittone also drew another drawing (Paris, Musée des Arts Décoratifs, II, no. 200) that bears a strong resemblance to Chiaveri's project for a new dome of St. Peter's; see OECHSLIN, "Vittone e l'architettura europa del suo tempo," in Viale, ed., *Bernardo Vittone e la disputa*, II, pp. 29-80, here p. 35, note 1. Finally, Vittone made several drawings of door and window mouldings (Paris, Musée des Arts Décoratifs, I, nos. 76, 65, 127) after designs illustrated in Chiaveri's *Ornamenti Diverse di Porte, e Finestre*, 4 vols. (Dresden, 1743-44); see OECHSLIN, "Vittone e l'architettura," p. 35, note 2, figs. 6-a, 6-b, 7-a, 7-b, 7-c. On Chiaveri's book, which Vittone does not seem to have owned, see C. CARAFFA, "Ornamenti Diversi di Porte, e Finestre, incisioni di Gaetano Chiaveri," *Il disegno di architettura* 18 (November 1998), pp. 42-46.

⁵⁵ Derizet was born in Lyons and came to Rome as a student of the French Academy and Prix de Rome winner in architecture and stayed there until his death. His participation in the First Class competition of the *Concorso Clementino* of 1725 was unremarkable. He began teaching at the Accademia di San Luca in 1727. On Derizet and his involvement in the *Concorso*

Derizet with having introduced the theme of perspective as a topic of discussion at the Accademia, and argues that Vittone's later treatment of perspective, architectural proportion, and music in his own architectural treatises, *Istruzioni elementari* (1760) and *Istruzioni diverse* (1766), reflects Derizet's lasting influence.⁵⁶ Oechslin also suggests that Derizet was instrumental in introducing Vittone to French architectural theory.⁵⁷ Indeed, Vittone mentions by name a number of French theoreticians and their writings in both of his treatises, including Derizet's own teacher at the Paris Academy,

Clementino of 1732, see W. OECHSLIN, "Contributo alla conoscenza di Antonio Derizet, architetto e teorico dell'architettura," *Quaderni dell'Istituto di Storia dell'Architettura dell'Università di Roma* XVI:91-96 (1969), pp. 47-66; IDEM., *Bildungsgut*, pp. 118-135, note 81 on pp. 182-183; J. GARMS, "Die Architektur Themen des Concorso Clementino der Accademia di San Luca von 1732," *Wiener Jahrbuch für Kunstgeschichte* XXII (1969), pp. 194-200, here pp. 196-197; BENEDETTI, "L'architettura dell'Arcadia," pp. 365-367, figs. 27-31; MARCONI/CIPRIANI/VALERIANI, *I disegni*, II, p. 8, nos. 2131-2134, figs. 2131-2134; and M. DILET, "Deriset, Antoine," in Placzek, ed., *Macmillan Encyclopedia of Architects*, I, p. 557.

⁵⁶ OECHSLIN, "Contributo," pp. 51-52; IDEM., "Il soggiorno," pp. 400-401; IDEM., *Bildungsgut*, pp. 123, 139. Derizet's interest in proportion and music is indicated by his proposal for the drafting of a treatise on these subjects, made on the occasion of his election as *accademico di merito* to the Accademia di San Luca in 1728. Oechslin argues that Vittone's chapter on musical proportions in *Istruzioni elementari* and his chapter on harmonic instructions in *Istruzioni diverse*, the latter written by Vittone's assistant, Giovanni Battista Galletto, are direct evidence of Derizet's influence.

⁵⁷ OECHSLIN, "Il soggiorno," pp. 401-402. In 1676 the Accademia di San Luca and the Académie Royale d'Architecture in Paris were formally aggregated. Thereafter, French influence on the Roman academy was pronounced, affecting the production of both Carlo Fontana and Filippo Juvarra among others. Juvarra in fact maintained close ties to France and the French Academy in Rome. In 1709 the director of the French Academy sent one of Juvarra's projects to Paris with the intention of securing employment there for Juvarra. Later, Juvarra was commissioned to design the catafalque for the funeral of the Dauphin in San Luigi dei Francesi, and still later Juvarra designed a project for a mausoleum for Louis XIV upon the king's death in 1715. Thus Vittone's introduction to French architectural theory may have owed something also to Juvarra's ties to both the French Academy and the French court. On the linkage between the Roman and Parisian academies during the seventeenth and eighteenth centuries, see H. HAGER, "The Accademia di San Luca in Rome and the Académie Royale D'Architecture in Paris: A Preliminary Investigation," in Hager and Munshower, eds., *Projects and Monuments*, pp. 128-161; G.R. SMITH, "The Concorso Accademico of 1677 at the Accademia di San Luca," in Hager and Munshower, eds., *Projects and Monuments*, pp. 26-45; IDEM., "Diplomacy by Design: The Aggregation and Centenary Competitions at the Accademia di San Luca in Rome and the Accademia's Relations with the French Academy," Ph.D. dissertation, The Pennsylvania State University, University Park, Pennsylvania, 1987; and IDEM., *Architectural Diplomacy*.

Antoine Desgodetz (1653-1728),⁵⁸ and Desgodetz's teacher, François Blondel (1617-86),⁵⁹ together with François Derand (1580-1644),⁶⁰ Claude Perrault (1613-88),⁶¹ René Ouvrard (1624-94),⁶² Charles Augustin Daviler (1653-1700),⁶³ Bernard Forest de Bélidor (1697-1761),⁶⁴ and Amédée-François Frézier (1682-1773).⁶⁵ In addition, Vittone owned architectural treatises by many of these same theoreticians. For example, he owned two copies of Desgodetz's *Les Edifices antiques de Rome* (1682),⁶⁶ a copy of Perrault's *Les dix livres d'architecture* (1673),⁶⁷ an unidentified copy of one of Blondel's treatises, in all probability

⁵⁸ VITTONI, *Istruzioni elementari*, p. 348: "...come vien accennato dal Desgodetz."

⁵⁹ IBID., p. 269: "...riferisce il Signor Blondel nel suo Corso d'Architettura..."; p. 367: "...ma pensiero già fu del Signor Blondel..."; p. 382: "Il signor Blondel nel suo corso d'Architettura..."; p. 508: "...il Signor Blondel nel corso d'Architettura..."; IDEM., *Istruzioni diverse*, p. 107: "D'un tal ripiego fa menzione il Signor Blondel..."; p. 112: "Di tal sorta di terreno parlando il Signor Blondello [sic]..."

⁶⁰ IDEM., *Istruzioni elementari*, p. 508: "Così il P. Derand nell' Architettura delle Volte..."

⁶¹ IBID., p. 260: "...sono al parere di M. Perault [sic] que' risalti..."; p. 275: "...riassunta da M. Perault [sic]..."; p. 496: "...o (come meglio legge il Signor Perault [sic]) Inserta..."; IDEM., *Istruzioni diverse*, p. 118: "...esser cosa fatta osservare da M. Perault [sic] ne' suoi commenti sovra Vitruvio..."

⁶² IDEM., *Istruzioni elementari*, p. 367: "...appoggiato al sentimento del Signor Ovrard [sic]..."

⁶³ IBID., p. 479: "...che ce ne dà il Daviller [sic] nel Taglio di esse..."; IDEM., *Istruzioni diverse*, p. 85: "...giusta il rapporto di Daviler..."; p. 95: "...che ne fa Daviller..."

⁶⁴ IBID., p. 114: "Il sentimento seguendo del Signor Belidoro [sic]..."; p. 115: "Il Signor Belidoro [sic] la costituisce..."; p. 117: "...al dire del Signor Belidoro [sic]..."

⁶⁵ IDEM., *Istruzioni elementari*, p. 503: "...seguendo il sentimento del Signor Frezier Scrittore assai valente..."

⁶⁶ A. DESGODETZ, *Les Edifices antiques de Rome dessinés et mesurés très exactement* (Paris, 1682; facs. ed., Farnborough, 1969). On the listing of the two copies of Desgodetz's treatise in the inventory of Vittone's library (recorded as "Antichità di Roma" and "Edifici di Roma" respectively), see PORTOGHESI, *Bernardo Vittone*, pp. 249-250, nos. 520, 641.

⁶⁷ C. PERRAULT, *Les dix livres d'architecture de Vitruve, corrigez et traduits nouvellement en Français* (Paris, 1673). On the listing of Perrault's treatise in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 249, no. 517.

Cours d'architecture (1675-83),⁶⁸ a copy of Daviler's *Cours d'Architecture* (1691),⁶⁹ a copy of Bélidor's *La science des ingénieurs* (1729),⁷⁰ and a copy of Frézier's *La théorie et la pratique* (1737-39).⁷¹ In addition, he owned an unidentified copy of one of Abraham Bosse's treatises, most likely *Traité des manières* (1664).⁷² It is significant that all of these treatises, with the exception of Bélidor's *La science des ingénieurs* and Frézier's *La théorie et la pratique*, date to the seventeenth century. That is to say, they were published decades before Vittone enrolled in the Accademia di San Luca, and thus were readily available to him while he studied at the Accademia under Derizet's instruction.⁷³ Frézier's treatise is the

⁶⁸ F. BLONDEL, *Cours d'architecture enseigné dans l'Académie Royale d'Architecture* (Paris, 1675-1683). On the listing of Blondel's treatise in the inventory of Vittone's library (recorded as "Décoration des edifices"), see PORTOGHESI, *Bernardo Vittone*, p. 250, no. 680.

⁶⁹ C.A. DAVILER, *Cours d'Architecture qui comprend les ordres de Vignole* (Paris, 1691). On the listing of Daviler's treatise in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 249, no. 554.

⁷⁰ B.F. de BÉLIDOR, *La science des ingénieurs dans la conduite des travaux de fortifications et d'architecture civile* (Paris, 1729). On the listing of Bélidor's treatise in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 251, no. 752.

⁷¹ A.-F. FRÉZIER, *La théorie et la pratique de la coupe de pierres et des bois pour la construction des voûtes et autres parties des bâtiments civils et militaires, ou traité de stéréotomie, à l'usage de l'architecture*, 3 vols. (Strasbourg, 1737-39). On the listing of Frézier's treatise in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 249, no. 547.

⁷² A. BOSSE, *Traité des manières de dessiner les ordres de l'architecture antique en toutes leurs parties* (Paris, 1664). On the listing of Bosse's treatise in the inventory of Vittone's library (recorded simply as "Architettura"), see PORTOGHESI, *Bernardo Vittone*, p. 249, no. 518.

⁷³ Vittone also was familiar with the workings of the Royal Academy of Sciences in Paris and with the writings of mathematicians and scientists associated with it, including Jean Picard (1620-82), Jacques Ozanam (1640-1717), Pierre Bouguer (1698-1758), Jacques Cassini (1677-1756), César-Francois Cassini de Thury (1714-84), and Nicolas Louis de Lacaille (1713-62), all of whom he mentions by name in his treatises: *Istruzioni elementari*, p. 488: "...nel corso di Matematica del Signor Ozanam..."; IDEM., *Istruzioni diverse*, p. 84: "...osservazioni modernamente fatte da' Matematici della Regia Accademia delle Scienze di Parigi..."; p. 86: "...il rapporto d'Ozanam nella sua Geografia [...] ora citato d'Ozanam..."; p. 87: "...e fra' Moderni dalli Signori Picard, Cassini, de Thuri, de la Caille, ed altre celebri Matematici della Regia Accademia suddetta Parigi..."; p. 88: "...in cui (come ben notò M. Bouguer nel suo Trattato della figura della Terra) in troverebbero..."; p. 89: "...siccome ben pure accennò il prefato M. Bouguer..."; p. 92: "...state prese da virtuosi e rispettabili Soggetti della fioritissima Regia Accademia delle Scienze di Parigi..."; 95: "...che ne fa Ozanam nella sua Geografia [...]"

only one of the French architectural treatises owned by Vittone to have been published subsequent to his graduation from the Accademia di San Luca, but it is not so much a theoretical tract as a technical manual on stereotomy. There is also Bélidor's treatise that was published just two years before Vittone enrolled in the Accademia di San Luca, but it too is a technical manual on military and civil engineering.⁷⁴ To put the matter another way, Vittone was well versed in seventeenth-century French architectural theory, but there is no evidence, either from the inventory of books in his library or from the references he makes to other authors and writings in his architectural treatises, to suggest that he was knowledgeable of contemporary eighteenth-century French theory. For example, Vittone appears not to have read Abbé Marc-Antoine Laugier's *Essai sur l'architecture* (1753), nor for that matter Jean Louis de Cordemoy's *Nouveau traité de toute l'architecture* (1706).⁷⁵

M. Cassini nelle Memorie dell' Accademia anzidetta [...] Il prefato M. Cassini nelle Memorie anzidette..."; p. 95, note 1: "...che cuì con Ozanam diciamo ... asseriscono le Memorie della Regia Accademia suddetta..."; p. 96: "...compute fattone da M. Picard sulle Misure [...] già misurati da M. Picard [...] Il sovramenzionato M. Cassini soggiunge nelle Memorie suddette..."; p. 97: "M. Bouguer nel suo Trattato [...] Lo stesso M. Bouguer finalmente in detto suo Trattato..."; p. 98: "...componenti la media di M. Picard [...] ritrovate dallo Scrittore delle Memorie suddette della Regia Accademia [...] comunemente fanno i Matematici colla Regia Accademia..." Vittone also owned a copy each of two of Ozanam's treatises, *Recreations mathematiques et physiques, qui contiennent plusieurs problèmes d'arithmetique, de geometrie, d'optique, de gnomonique, de cosmographie, de mecanique, de pyrotechnie, & de physique*, 2 vols. (Paris, 1694), and *Nouveaux elemens d'algebra, ou, Principe generaux pour résoudre toutes sortes de problèmes de mathématique* (Amsterdam, 1702). On the listing of Ozanam's two treatises in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 249, nos. 601, 602.

⁷⁴ Vittone also was familiar with another French treatise on stereotomy, François Derand's *L'architecture des voûtes: ou, l'art des traits, et coupe des voutes, traité tres util, voire necessaire a tous architectes, maîtres masons, appareilleurs, tailleurs de pierre et generalement a tous ceux qui se meslent de l'architecture, mesme militaire* (Paris, 1643), since he cites it by name in his treatise (*Istruzioni elementari*, p. 508): "Così il P. Derand nell' Architettura delle Volte..." but which is not recorded in the inventory of his library.

⁷⁵ M.-A. LAUGIER, S.J., *Essai sur l'architecture* (Paris, 1753; facs. 1775 ed., Farnborough, 1966); J.L. DE CORDEMOY, *Nouveau traité de toute l'architecture ou l'art de bastir utile aux entrepreneurs et aux ouvriers* (Paris, 1706; facs. 1714 ed., Farnborough, 1966). Neither is recorded in the inventory of Vittone's library, and neither is mentioned by Vittone in his writings.

Student advancement at the Accademia di San Luca was gained through success in competitions, in particular the *Concorso Clementino*, the themes of which were set at three levels of increasing difficulty, each written by a senior professor and announced six months to a year in advance.⁷⁶ Once a student was deemed “ready” he was allowed to enter a competition at the level determined by his professor. Winning first prize in either the Third or Second Class competitions admitted the student into the next higher class; winning first prize in the First Class competition admitted the student into full membership of the Accademia for which he was required to submit an additional project, the *dono accademico*, as proof of his ability. Once admitted as a member to the Accademia the student became eligible to teach there. The length of study necessary to achieve sufficient proficiency to gain entry into competitions varied widely. Vittone, like Juvarra before him, took less than one year of study to advance to the First Class competition, winning the first prize on his very first try. Other students such as Pietro Passalacqua took four years to advance from the Third to the First Class, but without ever having won first prize in the First Class competition.⁷⁷

⁷⁶ See MILLON, “Juvarra and Architectural Education,” p. 32; IDEM., “Juvarra and the Accademia,” p. 15. On the *Concorsi Clementini* at the Accademia di San Luca, see MUNSHOWER, ed., *Architectural Fantasy*, pp. 8-140; H. HAGER, “Le Accademie di architettura,” in G. Curcio and E. Kieven, eds., *Storia dell’architettura italiana: il Settecento*, 2 vols. (Milan, 2000), I, pp. 20-49, here pp. 23-30, 46-47; and A. CIPRIANI, ed., *Æqua Potestas. Le arti in gara a Roma nel Settecento* (Rome, 2000), pp. 117-150.

⁷⁷ MILLON, “Juvarra and Architectural Education,” pp. 33-34; IDEM., “Juvarra and the Accademia,” p. 15. Passalacqua won second prize in the Third Class competition of 1706, first prize in the Third Class competition of 1707, second prize in the Second Class competition of 1708, second prize in the First Class competition of 1710, and second prize in the First Class competition of 1713. On Passalacqua’s competition projects, see also MARCONI/CIPRIANI/VALERIANI, *I disegni*, I, pp. 8-11, nos. 172, 183, 205-207, 229-232, 268-270, figs. 172, 183, 205-207, 229-232, 268-270.

Once enrolled in the Accademia, Vittone's success was as brilliant as it was immediate — in May 1732 he won first prize in the First Class competition in architecture of the *Concorso Clementino* with his design for *A City Surrounded by the Sea* (Figure 1.4).⁷⁸ That Vittone was allowed to compete in the First Class competition straight away, and that he won first prize on his very first attempt, attest to his considerable ability and skill. Vittone's victory, together with that of another native of Piedmont, Paolo Antonio Massazza di Valdandona (1710-85),⁷⁹ winner of the first prize in the Second Class competition in architecture of that same year, undoubtedly was happily received by Juvarra who was visiting Rome during the spring and summer of 1732 at the very time when the *Concorso Clementino* was taking place.⁸⁰

⁷⁸ Second prize was won by Carlo Sala and third prize by Giuseppe Doria. On the theme of the First Class competition of the *Concorso Clementino* of 1732 and Vittone's prize-winning project, see V. GOLZIO, "L'architetto Bernardo Vittone Urbanista," in *Atti del X Congresso*, pp. 101-112; MARINI, *L'architettura barocca*, pp. 153-154; CARBONERI/VIALE, eds., *Bernardo Vittone architetto*, p. 17, no. 10, figs. 9-12; GARMS, "Die Architektur," pp. 194-200; OECHSLIN, *Bildungsgut*, pp. 167-168; MARCONI/CIPRIANI/VALERIANI, *I disegni*, I, pp. 15-16, nos. 311-411, figs. 311-411; W.F. COUSINS, Jr., "The Ideal Port, and the Concorsi Clementini of 1728, 1732, and 1738," Ph.D. dissertation, The Pennsylvania State University, University Park, Pennsylvania, 1982; P. MICALIZZI, "Arte, scienze e città nei temi del Concorso Clementino del 1732," *Storia della città* 8 (1978), pp. 33-48; MUNSHOWER, ed., *Architectural Fantasy*, pp. 108-122; CIPRIANI, ed., *Æqua Potestas*, pp. 135-136, nos. IV 21 – IV 25; PINTO, "Architecture and Urbanism," pp. 154-155; and G. DARDANELLO, ed., *Sperimentare l'architettura: Guarini, Juvarra, Alfieri, Borra e Vittone* (Turin, 2001), pp. 193-195.

⁷⁹ Massazza di Valdandona, like Vittone, was patronized by Cardinal Albani and was recommended by the Marchese d'Ormea; see BRICARELLI, "L'influenza di Roma," p. 223; and BAUDI DI VESME, *Schede Vesme*, II, p. 662. On Massazza di Valdandona and his project for the Second Class competition in the *Concorso Clementino* of 1732, see also CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 77; MARCONI/CIPRIANI/VALERIANI, *I disegni*, I, pp. 16-17, nos. 412-417, figs. 412-417 (in which the name "Massazza" is misspelled as "Marazza"); and CIPRIANI, ed., *Æqua Potestas*, pp. 138-139, nos. IV.26-IV.28 (in which the name "Massazza" is again misspelled as "Marazza"). Coincidentally, Vittone owned a copy of Massazza di Valdandona's book, *L'arco antico di Susa* (Turin, 1750), written years after the two had graduated from the Accademia; see PORTOGHESI, *Bernardo Vittone*, p. 249, no. 530.

⁸⁰ Juvarra arrived in Rome in March 1732 and remained there until August of that year before returning to Turin. In a letter of 17 May of that year, Juvarra sent news of the victories of Vittone and Massazza di Valdandona to Turin (Turin, Biblioteca Civica, Raccolta Autografici, Mazzo 20), published by POMMER, *Eighteenth-Century*, p. 260, § 5. See OECHSLIN, "Il soggiorno," p. 404; and IDEM., *Bildungsgut*, p. 141. On Juvarra's stay in Rome during 1732, see

Indeed, Vittone's design plainly manifests Juvarra's influence.⁸¹ For example, the central piazza of Vittone's urban project is fronted by four Greek cross churches whose plans and elevations (Figures 1.5-1.6) incorporate many of the ideas that Juvarra had introduced earlier in his own student project for a church, his *dono accademico*, submitted to the Accademia di San Luca in 1707, and would continue to develop and perfect at the Venaria Reale (1716-28) and the Superga (1717-31) both near Turin (Figures 1.7-1.8).

Vittone's victory in the *Concorso Clementino* earned him full membership in the Accademia di San Luca and on 16 November 1732, at the age of 28 years,⁸² he was elected *accademico di merito*.⁸³ The statutes of the

also ROVERE/VIALE/BRINCKMANN, *Filippo Juvarra*, pp. 95-97. On the Accademia di San Luca and its relation to art in Piedmont, see E. OLIVERO, *Brevi cenni sui rapporti fra la Reale Accademia di San Luca in Roma e l'Arte in Piemonte* (Turin, 1936), a source I was unable to consult.

⁸¹ See W. OECHSLIN, "Un tempio di Mosè – i disegni offerti da B.A. Vittone all'Accademia di San Luca nel 1733," *Bollettino d'Arte* LII:3 ser. 5 (July-September 1967), pp. 167-173, here p. 170; IDEM., "Il soggiorno," p. 404, note 4; IDEM., *Bildungsgut*, p. 18; and PINTO, "Architecture and Urbanism," p. 155.

⁸² The Congregation of the Accademia di San Luca passed a regulation in 1680 fixing the minimum age for membership so that no one under the age of 30 should be acknowledged *accademico di merito* (Archivio dell'Accademia di San Luca, Verbali delle Congregazioni, Vol. 45, f.86), cited in A. PERCY, "Castiglione's Chronology: Some Documentary Notes," *The Burlington Magazine* CIX:777 (December 1967), pp. 672-677, here p. 675, note 18. This regulation is cited by OLIVERO, *Le opere*, p. 21; MARINI, *L'architettura barocca*, p. 153; and POMMER, *Eighteenth-Century*, pp. 107, 259, § 1, to suggest that Vittone was born in 1702 since, as stipulated by the statute, he would have to have been at least 30 years of age at the time of his election as academician in 1732, and this date of birth was commonly accepted for Vittone until the correct date of 1704 was definitely established by CANTONE, "Nota genealogica," pp. 579-600. However, the academic statute was not consistently enforced, nor for that matter was it still in effect at the time of Vittone's election. Exceptions to the statute had been made for Carlo Fontana's son, Francesco, who was elected a full member of the Academy in 1694 at the age of 26, and for Filippo Juvarra who was elected a full member in 1706 at the age of 28; see VIALE, ed., *Mostra di Filippo Juvarra*, p. 46. In any case, the statute was dissolved in 1716, 15 years before Vittone enrolled in the Accademia, and the minimum age limit was lowered to 25 years of age; see OECHSLIN, *Bildungsgut*, p. 162; and H. HAGER, *Review of Bildungsgut und Antikenrezeption im frühen Settecento in Rom: Studien zum Römischen Aufenthalt Bernardo Antonio Vittones*, by W. Oechslin, *The Burlington Magazine* CXVII:873 (December 1975), pp. 814-816, here p. 815. Vittone's age of 28 years was therefore, at the time of his election as academician, well within the limit that was established by the academic statute and in force at that time.

⁸³ According to the new constitutions of the Accademia established in 1715 there existed several categories of membership, including the *accademico di merito*, the *accademico d'honore*,

Accademia required that an elected candidate submit an additional architectural design, the *dono accademico*, as proof of his ability, and on 6 April 1733 Vittone submitted his design for a *Temple of Moses* (Figure 1.9) which again owes much to Juvarra's earlier *dono accademico* of 1707,⁸⁴ and which Vittone later reproduced as an engraved plate in *Istruzioni elementari* (Figure 1.10).⁸⁵ As a full member of the Accademia di San Luca Vittone became eligible to teach there. However, in April 1733, immediately upon submitting his *dono accademico*, Vittone quit Rome for Piedmont never to return.

Vittone's success at the Accademia earned him the approval and support of powerful patrons. King Carlo Emanuele III of Savoy was so pleased with Vittone's achievement that he sent him money to continue his studies,⁸⁶ and Cardinal Alessandro Albani, the king's representative at the

and the *accademico di grazia*. The *accademico di merito* was awarded to students and limited in number to twelve for each of the visual arts; the *accademico d'honore* was awarded to princes, cardinals, and ambassadors and unlimited in number; the *accademico di grazia* was awarded to theologians, philosophers, poets, and writers. See MISSIRINI, *Memorie per scrivere*, p. 195; OLIVERO, *Le opere*, p. 26; and L. PIROTTA, "Una poco nota categoria di accademici di San Luca: gli accademici di grazia," *Strenna dei Romanisti XXVIII* (1967), pp. 349-356. There was also the category of *accademico di giustizia* (OECHSLIN, *Bildungsgut*, p. 120, note 15 on p. 178).

⁸⁴ Rome, Accademia di San Luca, Arch. St., Cart. Y, n. 266. OLIVERO, *Le opere*, p. 58, was the first to suggest that Vittone's project for a *Temple of Moses* was submitted to the Accademia as his *dono accademico*, a hypothesis now confirmed by OECHSLIN, "Tempio di Mosè," p. 167, note 2 on pp. 171-172; IDEM., "Il soggiorno," p. 395, note 1, p. 397, note 1, p. 412, fig. 51; and IDEM., *Bildungsgut*, pp. 147-155, note 35 on p. 187. On Vittone's *Temple of Moses* project, see also MARCONI/CIPRIANI/VALERIANI, *I disegni*, II, p. 9. nos. 2176-2177, figs. 2176-2177; MUNSHOWER, ed., *Architectural Fantasy*, pp. 162-165; and SMITH, *Architectural Diplomacy*, pp. 211-212, figs. 163-164. In designing his *Temple of Moses* project, Vittone drew upon a number of other sources besides Juvarra's academic project of 1707, including Fischer von Erlach's Karlskirche in Vienna and Nicola Salvi's fireworks machine of 1728; see OECHSLIN, "Il soggiorno," p. 408, note 2; and IDEM., *Bildungsgut*, pp. 17-18, 153.

⁸⁵ VITTONI, *Istruzioni elementari*, pl. 75. OLIVERO, *Le opere*, pp. 26-27, was the first to draw a connection between Vittone's plate in *Istruzioni elementari* and his drawings of the *Temple of Moses* offered to the Accademia di San Luca. See also OECHSLIN, "Tempio di Mosè," p. 167; IDEM., "Il soggiorno," p. 412, figs. 51-52; and IDEM., *Bildungsgut*, pp. 147-151, note 2 on p. 190, figs. 9-10.

⁸⁶ OLIVERO, *Le opere*, p. 27, has published a letter of 1 July 1732 sent from the Marchese d'Ormea to Vittone informing the latter of the king's gift.

papal court and nephew of the late Pope Clement XI Albani (1700-21),⁸⁷ made his library available to the young architect so that he could examine his collection of architectural books and drawings.⁸⁸ It was here, in Albani's library, that Vittone encountered Carlo Fontana's drawings,⁸⁹ meticulously copying them first-hand to produce numerous sheets, presently gathered in two voluminous sketchbooks conserved in the Musée des Arts Décoratifs in Paris.⁹⁰ Many of these copies eventually were engraved and published in Vittone's two architectural treatises, *Istruzioni elementari* and *Istruzioni diverse*.⁹¹ Vittone's exposure to Fontana's drawings was undoubtedly due to

⁸⁷ It was Pope Clement XI Albani who instituted the *Concorsi Clementini* at the Accademia di San Luca in 1702.

⁸⁸ POMMER, *Eighteenth-Century*, p. 261, § G, has published a letter of 14 December 1732 written by Cardinal Albani to the Marchese d'Ormea stating that Vittone was studying works of architecture in the Cardinal's library. Vittone himself explicitly mentions Cardinal Albani in *Istruzioni elementari*, p. 602: "...Eminentissimo Sig. Cardinale Alessandro Albani, Nipote della sempre gloriosa memoria di Clemente XI..."

⁸⁹ Cardinal Albani had inherited Fontana's drawings upon the death of his uncle, Pope Clement XI Albani, in 1721. From there they passed into the possession of King George III of England in 1762, and today are housed in the Royal Library at Windsor Castle. See A. BLUNT and H.L. COOKE, *The Roman Drawings of the XVII and XVIII Centuries in the Collection of Her Majesty the Queen at Windsor Castle* (London, 1960); A. BLUNT, "The Drawings of Carlo Fontana in the Royal Collection at Windsor Castle," in P.F. Palumbo, ed., *Barocco europeo, Barocco italiano, Barocco salentino* (Lecce, 1970), pp. 89-92; and A. BRAHAM and H. HAGER, *Carlo Fontana, The Drawings at Windsor Castle* (London, 1977).

⁹⁰ Vittone's drawings are currently conserved in the library of the Musée des Arts Décoratifs in Paris, acquired in 1903 from the painter, Albert Besnard, who had bought them in Rome. For a discussion of these drawings, see WITTKOWER, "Vittone's Drawings," pp. 165-172, according to whom (p. 167) at least 99, and possibly 118, of the 232 sheets in Vittone's Paris notebook were copied after Fontana.

⁹¹ *Istruzioni elementari* and *Istruzioni diverse* were each published in two volumes with a volume of text and a volume of engraved plates. The plates of *Istruzioni elementari* were delineated principally by Giovanni Battista Borra and incised principally by Giovanni Antonio Belmondo but with contributions by G. Lepoer and Del Re. Both Borra and Belmondo were employed by Vittone during the mid-1730s at the very time that Vittone was at work editing Guarino Guarini's architectural treatise for publication. Borra's drawings for the plates of *Istruzioni elementari* are collected in an unpublished manuscript, "Corso d'Architettura civile sopra li cinque ordini di Giacomo Barozzio da Vignola, disegnato da Giambattista Borra di Dogliani sotto la direzione del Signor Architetto & Accademico di Roma Bernardo Vitone [sic] in Torino 1734," today conserved in the Biblioteca Reale in Turin. Borra's drawings were rendered within a year of Vittone having completed his studies at the

Juvarra who, as both a devoted student of Fontana and a long-time protégé of Annibale Albani and close associate of the Albani family,⁹² possessed both the motivation and the means to mediate Vittone's entry into the Albani library.⁹³

Vittone also consulted Fontana's architectural treatises, *Templum Vaticanum* (1690) and *L'Anfiteatro Flavio* (1725), copies both of which he owned

Accademia di San Luca in 1733 and thus prove the veracity of Vittone's claim that he had conceived the treatise during his youth, *Istruzioni elementari*, Preface, p. IV: "Concepita fu essa in gioventù fra i bollori d'un animo volenteroso di far profitto nell' Arte." On Borra and his work for Vittone, see OLIVERO, *Le opere*, p. 41; RODOLFO, "Notizie inedite," p. 449; CAVALLARI MURAT, "Alcune architetture," p. 4; MARINI, *L'architettura barocca*, p. 172; BRAYDA/COLI/SESIA, "Ingegneri," p. 92; BAUDI DI VESME, *Schede Vesme*, I, p. 177; G. CONTERNO, "L'architetto Giovan Battista Borra, doglianese," *Bollettino della Società per gli Studi Storici, Archeologici ed Artistici della Provincia di Cuneo* 83 (1980), pp. 181-182; D. WIEBENSON, ed., *Architectural Theory and Practice from Alberti to Ledoux* (Charlottesville, 1982; 2nd rev. ed., 1983), no. II-31; H.A. MILLON, "Borra, Giovanni Battista," in Placzek, ed., *Macmillan Encyclopedia of Architects*, I, p. 247; F. SILBANO, "Giovanni Battista Borra. Provincialismo e internazionalità di un architetto piemontese," *Atti e rassegna tecnica della Società degli Ingegneri e degli Architetti di Torino* n.s. XLV:9-10 (September-October 1991), pp. 495-499; W. CANAVESIO, "Anni di apprendistato. Giovanni Battista Borra nella studio di Vittone," *Studi Piemontesi* XXVI:2 (November 1997), pp. 365-381; O. ZOLLER, *Der Architekt und der Ingenieur Giovanni Battista Borra (1713-1770)* (Bamberg, 1996); and DARDANELLO, ed., *Sperimentare*, pp. 25-29. The plates of *Istruzioni diverse*, generally of better quality than those of the earlier treatise, were delineated by Mario Ludovico Quarini and incised by Quarini and Giulio Cesare Bianchi with assistance from G. Lepoer, Ripa, Pietro Peiroleri, and Jac. Mercorus. Quarini's drawings for the plates are collected in the unpublished manuscript, "L'architetto civile volume originale delle opere del signor Bernardo Vitone [sic] insigne allievo dell'Accademia in Roma del MDCCLX," today conserved in the Biblioteca Reale in Turin; see the discussion in CARBONERI, "Appunti," pp. 59-74. On Quarini and Bianchi's work on the plates of *Istruzioni diverse*, see OLIVERO, *Le opere*, pp. 67-75; RODOLFO, "Notizie inedite," p. 449; CAVALLARI MURAT, "Alcune architetture," pp. 3-7; WIEBENSON, ed., *Architectural Theory*, no. II-31; and CANAVESIO, "Inediti vittoniani," p. 170.

⁹² On Annibale Albani's patronage of Juvarra, see ROVERE/VIALE/BRINCKMANN, *Filippo Juvarra*, p. 95

⁹³ See WITTKOWER, "Vittone's Drawings," p. 169, note 50, who suggests that Vittone's entry into Cardinal Albani's library was due to Juvarra's efforts, and that without Juvarra's intervention it would be most difficult to explain either Vittone's interest in Fontana, or his privileged access to the Albani library. Juvarra was in Rome between March and August 1732 where he had been summoned on behalf of Cardinal Albani himself to submit a design for the new sacristy for St. Peter's, a commission ultimately won by Alessandro Galilei. It was also during this same time, between May and June, that Vittone produced his prize-winning project for the *Concorso Clementino*. Thus it is highly probable that during the spring or summer of 1732 Juvarra would have introduced Vittone to Cardinal Albani and negotiated Vittone's entry into his library. Cardinal Albani was certainly cognizant of Vittone's success in the *Concorso Clementino* since he was in attendance with other cardinals at the presentation of prizes at the Campidoglio. See also OECHSLIN, "Il soggiorno," p. 396, note 1; and IDEM., *Bildungsgut*, p. 137, note 8 on pp. 184-185.

and presumably purchased in Rome.⁹⁴ From *Templum Vaticanum* Vittone took Fontana's method for configuring a dome and modified it for his own use.⁹⁵ And from *L'Anfiteatro Flavio* he took Fontana's unexecuted project for a centrally planned martyrial church to be erected in the Colosseum as inspiration for his own centrally planned church designs in his *Concorso Clementino* project.⁹⁶

In addition to having consulted Fontana's drawings and treatises, Vittone spent his academic years closely studying and copying illustrations from another book, *Entwurf einer Historischen Architektur* (1721),⁹⁷ written by

⁹⁴ C. FONTANA, *Templum Vaticanum et ipsius origo: cum ædificiis maximè conspicuis antiquitus, & recens ibidem constitutis* (Rome, 1694); IDEM., *L'Anfiteatro Flavio, descritto e delineato dal Cavaliere Carlo Fontana* (The Hague, 1725). On the listing of Fontana's two treatises in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 250, nos. 627, 626. See also A. CAVALLARI MURAT, "Aggiornamento tecnico e critico nei trattati vittoniani," in Viale, ed., *Bernardo Vittone e la disputa*, I, pp. 457-600, here p. 483, who suggests that Vittone acquired his copy of *Templum Vaticanum* while in Rome. On Fontana's treatises themselves, see H. HAGER, "Le opere letterarie di Carlo Fontana come autorappresentazione," in B. Contardi and G. Curcio, eds., *In Urbe Architectus: Modelli, Disegni, Misure, La professione dell'architetto Roma 1680-1750* (Rome, 1991), pp. 162-171; and IDEM., "Osservazioni su Carlo Fontana e sulla sua opera del Tempio Vaticano (1694)," in G. Cantone, ed., *Centri e Periferie del Barocco*, 3 vols. (Rome, 1992), I, pp. 83-130.

⁹⁵ VITTONI, *Istruzioni elementari*, pp. 511-514, pls. 88-89. See also CAVALLARI MURAT, "Aggiornamento," p. 483, figs. 30-31; and OECHSLIN, *Bildungsgut*, p. 153, note 32 on p. 192.

⁹⁶ Fontana's martyrial project influenced not only the architecture of Vittone, but that of several generations of students and academicians, including notably Juvarra's church project submitted to the Accademia in 1707 and Antoine Derizet's centralized church of Santissima Nome dei Maria in Trajan's Forum in Rome (1736-41). The posthumous publication of *L'Anfiteatro Flavio* in 1725, just six years before Vittone's arrival in Rome, appears to have affected the course of study at the Accademia di San Luca for several years, prompting renewed interest in Fontana's church project and in the Colosseum itself. For example, in 1732, the year that Vittone won first prize in the First Class competition of the *Concorso Clementino*, the subject established for the Second Class competition was for a theater of a type inspired in part by the Colosseum; see MARCONI/CIPRIANI/VALERIANI, *I disegni*, I, p. 17, nos. 412-429, figs. 412-429. On Fontana's martyrial church project and its subsequent influence, see H. HAGER, "Carlo Fontana's Project for a Church in Honour of the 'Ecclesia Triumphans' in the Colosseum, Rome," *Journal of the Warburg and Courtauld Institutes* XXXVI (1973), pp. 319-337; IDEM., "Introduction," in C. Fontana, *L'Anfiteatro Flavio, edizione anastatica del manoscritto nel Museo di Roma*, ed. H. Hager (Rome, 2002), pp. ix-xxvii; and B. WISCH, "The Colosseum as a Site for Sacred Theater: A Pre-History of Carlo Fontana's Project," in Millon and Munshower, eds., *An Architectural Progress*, pp. 94-111.

Johann Bernhard Fischer von Erlach (1656-1723) who himself had worked in the studios of Bernini and Fontana during the 1670s and who, in addition, almost certainly was associated with the Accademia di San Luca.⁹⁸ Vittone owned a copy of Fischer von Erlach's book and, as Werner Oechslin conclusively demonstrates, consulted it for many of the ideas he incorporated in his prize-winning project for *A City Surrounded by the Sea* for the *Concorso Clementino* of 1732.⁹⁹ For example, Vittone's *parti* for a circular piazza at the center of his project, divided into four quadrants by a *cardo* and a *decumanus* and surrounded by building blocks containing Greek cross churches (Figure 1.5), can be traced to Fischer von Erlach's reconstructions of the ancient Temple at Nineveh (Figure 1.11) and the Naumachia Domitiani.¹⁰⁰ Likewise, Vittone's idea of a bridge with a triumphal arch (Figure 1.12) can be traced to Fischer von Erlach's reconstruction of Augustus Caesar's triumphal bridge erected over the Tiber River (Figure 1.13),¹⁰¹ while his idea of a seated figure

⁹⁷ J.B. FISCHER VON ERLACH, *Entwurff einer Historischen Architektur, in Abbildung unterscheidener berühmten Gebäude des Alterthums und fremder Völker* (Vienna, 1721; reprint 1725 ed., with text of 1730 English ed., Ridgewood, 1963).

⁹⁸ On Fischer von Erlach's ties to Fontana's studio and the Accademia di San Luca, see POMMER, *Eighteenth-Century*, p. 69; BRAHAM/ HAGER, *Carlo Fontana*, pp. 18-19; and K. NEVILLE "The Early Reception of Fischer von Erlach's *Entwurff einer Historischen Architektur*," *Journal of the Society of Architectural Historians* LXVI:2 (June 2007), pp. 160-175, here p. 162, notes 22 and 24 on pp. 173-174. On Vittone's knowledge of, and debt to, Fischer von Erlach's treatise, see OECHSLIN, "Il soggiorno," pp. 402-409; IDEM., *Bildungsgut*, pp. 13-58; and NEVILLE "The Early Reception," p. 170, note 67 on p. 175.

⁹⁹ On the listing of *Historischen Architektur* in the inventory of Vittone's library (recorded as "Meraviglie del mondo Architettura"), see PORTOGHESI, *Bernardo Vittone*, p. 250, no. 615; and OECHSLIN, *Bildungsgut*, p. 15, note 8 on pp. 39-40. According to NEVILLE "The Early Reception," p. 170, Vittone encountered Fischer von Erlach's book for the first time while a student in Rome.

¹⁰⁰ Rome, Accademia di San Luca, Arch. St., Concorsi; FISCHER VON ERLACH, *Historischen Architektur* (II-10; II-6). See OECHSLIN, "Il soggiorno," p. 408, fig. 29; and IDEM., *Bildungsgut*, pp. 21, 24, figs. 30, 32. The Naumachia Domitiani was also reconstructed in a drawing by Juvarra (ROVERE/ VIALE/ BRINCKMANN, *Filippo Juvarra*, pl. 263), which Vittone may well have consulted. Vittone's circular piazza also recalls Derizet's project for a Piazza and House submitted to the Accademia di San Luca in 1725; see OECHSLIN, "Contributo," pp. 62-63.

positioned atop the triumphal arch on the bridge owes much to the example of Fischer von Erlach's reconstruction of the Colossal Statue of Zeus at Olympia (fig. 1.14).¹⁰² Finally, Vittone's designs for domed churches facing onto the central piazza of the urban project (Figure 1.6) were inspired largely by Fischer von Erlach's design for the Karlskirche in Vienna as illustrated in an engraved plate of *Historischen Architektur* (Figure 1.16).¹⁰³

The Karlskirche also proved a source of inspiration for Vittone's academic project for a *Temple of Moses* project that he submitted in 1733 (Figure 1.9).¹⁰⁴ Moreover, in the version of the *Temple of Moses* project as subsequently illustrated in *Istruzioni elementari* (Figure 1.10), Vittone added a background structure whose concave arrangement can be traced to still another one of Fischer von Erlach's designs illustrated in *Historischen Architektur*, namely the scenographic colonnade pictured on its frontispiece

¹⁰¹ Rome, Accademia di San Luca, Arch. St., Concorsi; FISCHER VON ERLACH, *Historischen Architektur* (II-3). See OECHSLIN, "Il soggiorno," p. 407, figs. 24-25; and IDEM., *Bildungsgut*, pp. 18-19, figs. 17-18. Still, the lateral wings of Vittone's bridge, with their giant order and arrangement of openings and windows, are derived not so much from Fischer von Erlach's design, as from the lateral wings of Pompeo Ferrari's *Concorso Accademico* project of 1694 for a church in the center of symmetrically placed courtyards (Rome, Accademia di San Luca, Arch. St., Cart. B 353, 362, 381, 382); see IDEM., "Il soggiorno," p. 399, note 1, fig. 3; and IDEM., *Bildungsgut*, p. 138, note 16 on pp. 185-186. In addition, Vittone illustrates a reconstruction of an ancient Roman bridge, the Pons Aelius, in *Istruzioni diverse*, pl. 29, which OECHSLIN, *Bildungsgut*, pp. 16, 142, note 44 on p. 188, figs. 5-6, traces to Fischer von Erlach's reconstruction of the same bridge in *Historischen Architektur* (II-8). Vittone's triumphal bridge design are also indebted to several of Juvarra's bridge designs which themselves owe much to Fischer von Erlach's reconstructions; see D.R. MARSHALL, "Piranesi, Juvarra and the Triumphal Bridge Tradition," *The Art Bulletin* LXXXV:2 (June 2003), pp. 321-352.

¹⁰² FISCHER VON ERLACH, *Historischen Architektur* (I-5). See OECHSLIN, "Il soggiorno," p. 407, figs. 21, 23; and IDEM., *Bildungsgut*, p. 20, figs. 21, 23.

¹⁰³ Rome, Accademia di San Luca, Arch. St., Concorsi; FISCHER VON ERLACH, *Historischen Architektur* (IV, 12). See OECHSLIN, "Il soggiorno," p. 404, figs. 10, 31; IDEM., *Bildungsgut*, p. 18, figs. 11, 13; and M. FAGIOLO, "L'universo della luce nell'idea d'architettura del Vittone," in Viale, ed., *Bernardo Vittone e la disputa*, II, pp. 117-174, here fig. 2.

¹⁰⁴ OECHSLIN, "Il soggiorno," p. 408, figs. 30-31; and IDEM., *Bildungsgut*, pp. 17-18, figs. 10-11. The similarity between Vittone's *Temple of Moses* project and Fischer von Erlach's Karlskirche is particularly apparent in the drum in which the detached coupled columns are rendered in perspective in exactly the same way in both Vittone's drawing and Fischer von Erlach's plate.

(Figure 1.20).¹⁰⁵ This same scenographic colonnade makes a second appearance in the background structure of Vittone's project for a monumental stairway illustrated in *Istruzioni diverse* (Figure 1.21).¹⁰⁶ The façade of the Karlskirche, flanked on either side by a triumphal column,¹⁰⁷ also served as a model for Vittone's temple front illustrated in the frontispiece to *Istruzioni elementari*, but with the difference that Vittone's temple front is flanked, not by two triumphal columns, but by an obelisk on one side and a triumphal column on the other (Figure 1.17).¹⁰⁸ In addition, Vittone produced a number of academic drawings of obelisks, pyramids, mausolea, rostral columns, and ruined architectural fragments that, in their combination of fanciful invention and archeological correctness, immediately call to mind similar compositions by Fischer von Erlach (Figures 3.11-3.13).

It was at the Accademia di San Luca that Vittone also drew sketches after scenographic drawings by the celebrated painter and scenographer,

¹⁰⁵ VITTONI, *Istruzioni elementari*, pl. 75; and FISCHER VON ERLACH, *Historischen Architektur*, Frontispiece. See OECHSLIN, "Il soggiorno," p. 412, figs. 52-53; and IDEM., *Bildungsgut*, p. 17, figs. 7, 9. The scenographic background of Vittone's monumental stairway also recalls both the backdrop of Cortona's façade of Santa Maria della Pace in Rome and Juvarra's project for the Palazzo Madama with lateral wings and superstructure disposed in a perspectival rhythm; see IDEM., "Tempio di Mosè," p. 169, fig. 42; and IDEM., "Il soggiorno," p. 412, note 2.

¹⁰⁶ VITTONI, *Istruzioni diverse*, pl. 22. See FAGIOLO, "L'universo," p. 154, fig. 44; OECHSLIN, "Il soggiorno," p. 412, figs. 53-54; and IDEM., *Bildungsgut*, p. 17, figs. 7-8.

¹⁰⁷ Fischer von Erlach's idea of the flanking triumphal columns with spiral relief has its precedence in Domenico Fontana's catafalque for Pope Sixtus V (1590) and Giacomo Lauro's representation of the Temple of Virtue and Honor in Rome (1612); see I.R. LAVIN, "Fischer von Erlach, Tiepolo, and the Unity of the Visual Arts," in Millon and Munshower, eds., *An Architectural Progress*, pp. 498-525, here p. 502, figs. 21-23, 21-24.

¹⁰⁸ See FAGIOLO, "L'universo," pp. 128-129, fig. 1; and OECHSLIN, *Bildungsgut*, fig. 58. Vittone's temple front also reflects some of Juvarra's designs. For example, the flanking obelisk and column recall the twin obelisks that flank the entrance to Juvarra's project of 1715 for a Mausoleum of King Louis XIV of France (S. JACOB, *Italienischen Zeichnungen der Kunstbibliothek Berlin, Architektur und Dekoration 16. bis 18. Jahrhundert* (Berlin, 1975), pp. 146-147, nos. 753-755, fig. 754), while the tetrastyle portico appears to have been modeled after the tetrastyle portico that fronts Juvarra's Superga, itself flanked by twin campanile (FAGIOLO, "L'universo," p. 129, fig. 3).

Andrea Pozzo (1642-1709). In this Vittone was undoubtedly advised and encouraged by Juvarra who himself, during his own youth in Messina, had acquired a copy of Pozzo's treatise on perspective and architecture, *Perspectiva pictorum* (1693-1700), and studied it assiduously, liberally copying the scenographic designs illustrated in it.¹⁰⁹ Vittone likewise purchased a copy of Pozzo's treatise, a book that contributed as much to his architectural formation as it had earlier to Juvarra's formation.¹¹⁰ Evidence of Pozzo's influence on Vittone's prize-winning project for the *Concorso Clementino* may be seen, for example, in the statue seated atop the bridge with a triumphal arch, equipped with a helmet and a spear held in the right hand (Figure 1.12) in a manner that resembles Pozzo's statue of Roma/Minerva illustrated in *Perspectiva pictorum* (Figure 1.15).¹¹¹

Vittone also drew sketches after designs by other scenographers, notably various members of the Galli Bibiena family, in particular Ferdinando Galli Bibiena (1657-1743) and his brother Francesco (1659-1739). In this Vittone was again undoubtedly prompted by Juvarra who, at an early date in his career, about 1706, had been exposed to the ideas of Ferdinando Galli Bibiena and had become one of the first architects to make use of the *scena per*

¹⁰⁹ A. POZZO, S.J. *Perspectiva pictorum et architectorum Andreae Putei e Societate Jesu*, 2 vols. (Rome, 1693-1700; facs. 1707 English ed., vol. I., *Perspective in Architecture and Paintings*, New York, 1989). On Juvarra's reliance upon Pozzo's treatise, see ROVERE/VIALE/BRINCKMANN, *Filippo Juvarra*, p. 114. On Pozzo's treatise itself, see W. OECHSLIN, "Pozzo e il suo Trattato," in A. Battisti, ed., *Andrea Pozzo* (Milan and Trent, 1996), pp. 188-205.

¹¹⁰ On the listing of Pozzo's treatise in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 250, no. 649.

¹¹¹ See OECHSLIN, "Il soggiorno," p. 407, notes 4-5, figs. 21-24; and IDEM., *Bildungsgut*, pp. 140, 142, note 46 on p. 188, figs. 23, 26, who, in addition, observes that Vittone's design for the statue also bears similarities to Fischer von Erlach's reconstruction of the colossal statue of Zeus at Olympia illustrated in *Historischen Architektur* (I-5).

angolo.¹¹² Not surprisingly, Vittone's library contained several treatises by the Galli Bibiena, including Ferdinando's *Varie opere di prospettive* (1703-08) and *L'architettura civile* (1711),¹¹³ and Giuseppe's *Architetture e prospettive* (1740).¹¹⁴

During his Roman sojourn Vittone would have had the opportunity to examine the illusionistic work of yet another scenographer and architect, Juvarra's close friend, Nicola Michetti (ca. 1675-1758). Michetti, like Juvarra, was a student of Carlo Fontana and a full member of the Accademia di San Luca, having been elected *accademico di merito* in 1725 and thus eligible to teach there (although it is unlikely that he ever did so).¹¹⁵ Michetti, again like Juvarra, was also commissioned by Cardinal Pietro Ottoboni to design stage sets for the Teatro Ottoboni. And thus it is possible, even probable, that Juvarra introduced Vittone to Michetti. This Juvarra could have easily arranged during the spring or summer of 1732 when he was in Rome and when Vittone was drawing up his prize-winning project for the *Concorso Clementino*. Whether or not Vittone did in fact make Michetti's acquaintance,

¹¹² See ROVERE/VIALE/BRINCKMANN, *Filippo Juvarra*, p. 158; M. VIALE FERRERO, "Scenografia," in V. Viale, ed., *Mostra del Barocco Piemontese*. 3 vols. (Turin, 1963), I, pp. 1-56, here p. 22, pl. 12; and POMMER, *Eighteenth-Century*, pp. 24, note 5 on p. 32.

¹¹³ F. GALLI BIBIENA, *Varie opere di prospettiva inventate da Ferdinand Galli d. il Bibiena Bolognese Pittore et Architetto* (Bologna, 1703-08); IDEM., *Architettura civile preparata su la geometria, e ridotta alle prospettive* (Parma, 1711; reprint ed., with new Introduction by D.M. Kelder, New York, 1971). On the listing of Ferdinando Galli Bibiena's two treatises in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 250, nos. 613, 643.

¹¹⁴ G. GALLI BIBIENA, *Architetture e prospettive dedicate alla maestà di Carlo Sesto, imperador de' Romani, da Giuseppe Galli Bibiena, suo primo impegner teatrale, ed architetto, inventore delle medesime* (Augsburg, 1740; reprint English ed., *Architectural and Perspective Designs*, with new Introduction by A.H. Mayor, New York, 1964). See A.H. SAXON, "Giuseppe Galli-Bibiena's 'Architetture e prospettive,'" *Maske und Kothurn* 15 (1969), pp. 105-118. On the listing of Giuseppe Galli Bibiena's treatise in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 250, no. 635.

¹¹⁵ John Pinto, Professor of Art History at Princeton University, has informed me that to the best of his knowledge Michetti was not involved in teaching at the Accademia di San Luca.

his enrollment at the Accademia between 1731 and 1733 occurred during the very years when Michetti's architectural activity in Rome was reaching its peak. Vittone assuredly would have seen Michetti's newly renovated Palazzo Colonna as well as Michetti's ephemeral fireworks machines erected during the summer of 1732 in the Piazza Santi Apostoli for the *Festa della China*.

The Borrominian and Berninian Revivals

The early decades of eighteenth-century Rome witnessed revivals of the architecture of both Francesco Borromini (1599-1667) and Gian Lorenzo Bernini (1598-1680) that came to exert significant influence on Vittone's architectural development. The decade prior to Vittone's arrival in Rome had seen the publication of two treatises, Borromini's posthumous *Opus Architectonicum* (1720-25)¹¹⁶ and Domenico De Rossi's posthumous *Studio d'architettura civile* (1702-21),¹¹⁷ that promoted interest in the works of both architects. Vittone, who owned copies of both books,¹¹⁸ drew upon them for

¹¹⁶ F. BORROMINI, *Opera del Caval. Francesco Borromini Cavata da suoi originali cioè la Chiesa, e Fabrica della Sapienza di Roma con le vedute in Prospettiva e con lo studio delle proporzioni geometriche, piante, alzate, profili, e speccati*, Vol. I, *Opus architectonicum equitis Francisci Borromini ex ejusdem exemplaribus petitum, Oratorium nempe aedesque Romanae RRPP Congregationis Oratorii S. Philippi Nerii, additis scenographia, geometricis proportionibus ichonographia, prospectibus integris obliquis interioribus ac extremis partium lineamentis*, Vol. II (Rome, 1720-25; reprint ed., Milan, 1998). On Borromini's treatise, see P. PORTOGHESI, "L'Opus Architectonicum del Borromini," in D. Fraser, H. Hibbard and M.J. Lewine, eds., *Essays in the History of Architecture Presented to Rudolf Wittkower* (London, 1967), pp. 128-133; and J. CONNORS, "Sebastiano Giannini: *Opus Architectonicum*," in Contardi and Curcio, eds., *In Urbe Architectus*, pp. 204-213.

¹¹⁷ D. DE ROSSI, *Studio d'architettura civile, sopra gli ornamenti di porte e finestre tratti da alcune fabbriche insigni di Roma con le misure, piante, modini, profili*, 3 vols. (Rome, 1702-21). On De Rossi's treatise, see S. CIOFETTA, "Lo Studio d'Architettura Civile edito da Domenico De Rossi (1702, 1711, 1721)," in Contardi and Curcio, eds., *In Urbe Architectus*, pp. 214-228.

¹¹⁸ On the listing of De Rossi's treatise in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 250, no. 611. On the listing of Borromini's treatise of which there were two copies; see IBID., p. 250, nos. 617, 633; and OECHSLIN, *Bildungsgut*, p. 144, note 59 on p. 189.

his academic designs and continued to refer to them for the duration of his practice, even to the point of lifting images directly from them for his own architectural treatises of the 1760s.¹¹⁹

Borromini died in 1667 and for more than thirty years thereafter his architecture, routinely judged to be eccentric and capricious, was generally ignored if not despised and, in any case, exerted limited influence on the immediate course of Roman architecture. Bernini, on the other hand, who outlived Borromini by thirteen years, bequeathed an architectural legacy that, in the form of an academic classicism, was institutionalized for many decades by his pupils who came to dominate architectural practice and pedagogy in Rome.¹²⁰ Eventually, however, during the early decades of the eighteenth century, a Borrominian revival emerged in the face of determined opposition,¹²¹ and held sway until the pontificate of Clement XII Corsini (1730-40) when a revival of Bernini's architecture (which had never completely fallen out of fashion) took place.¹²²

¹¹⁹ OECHSLIN, "Il soggiorno," p. 411; IDEM., *Bildungsgut*, p. 32, figs. 58, 60. On Vittone's reliance on De Rossi's treatise, see IDEM., "Vittone e l'architettura," pp. 34-35, note 4 on p. 35.

¹²⁰ On Bernini's legacy in Rome, see H. HAGER, "Gian Lorenzo Bernini e la ripresa dell'alto barocco nell'architettura del Settecento romano," in G. Spagnesi and M. Fagiolo, eds., *Gian Lorenzo Bernini architetto e l'architettura europea del Sei-Settecento*, 3 vols. (Rome, 1983-84), II, pp. 469-496; IDEM., "Inquiries into Bernini's Architectural Legacy," *Quaderni dell'Istituto di Storia dell'Architettura* n.s. 15-20 (1990-92), pp. 693-706; and A. BRAHAM, "The Architectural Legacy of Bernini in Rome," in Millon and Munshower, eds., *An Architectural Progress*, pp. 448-467.

¹²¹ On the Borrominian revival in Rome, see "Influence and Reputation," in A. BLUNT, *Borromini* (Cambridge, Mass. and London, 1979), pp. 211-222; N.A. MALLORY, *Roman Rococo Architecture from Clement XI to Benedict XIV (1700-1758)* (New York and London, 1977); IDEM., "Notizie sull'architettura nel settecento a Roma, 1718-1760," *Bollettino del Arte* LXVII (1982), pp. 109-128, here p. 112; A. NEPPI, "Aspetti dell'architettura del Settecento a Roma," *Dedalo* XIII:1 (January 1933), pp. 18-34; P. PORTOGHESI, *Roma Barocca: The History of an Architectonic Culture*, Translated by B.L. La Penta (Cambridge, Mass. and London, 1970), pp. 357-380; and E. KIEVEN, "Il borrominismo nel tardo barocco," in R. Bösel and C.L. Frommel, eds., *Borromini e l'universo barocco*, 2 vols. (Milan, 2000), I, pp. 119-127.

¹²² See IDEM., "Revival del Berninismo durante il Pontificato di Clemente XII," in Spagnesi and Fagiolo, eds., *Gian Lorenzo Bernini*, II, pp. 459-468.

Following Bernini's death in 1680, Carlo Fontana, Bernini's most celebrated pupil and the Accademia's most illustrious member, championed a grand but academic brand of classicism that dominated the Roman architectural scene until his death in 1714. Fontana's enormous pedagogical impact upon the architectural formation of the leading architects of the following generation ensured the continuity of Bernini's legacy well into the eighteenth century. Giovanni Battista Contini (1642-1723), another one of Bernini's students and a highly influential member of the Accademia, was a vigilant supporter of classical orthodoxy. He loathed Borromini's architecture, which by the turn of the century was attracting increased interest, rejecting it as something frivolous if not downright dangerous. A vivid instance of the polemical debate which arose at that time "between the young agitators for a Borrominian revival and the staunch supporters of a definitive return to classicist orthodoxy" can be glimpsed in a confrontation, recorded by Contini's biographer, Lione Pascoli, between Contini and one of his students who had dared to present him with a Borrominian design for a church façade.

You see of course, master sir, that it follows the latest and most modern good taste, and I can tell you how I have worked and struggled to achieve this...¹²³

Contini, very annoyed to hear such "bestial" nonsense and to see such "misshapen" work, rebuked his student:

¹²³ L. PASCOLI, *Vite de' pittori, scultori, ed architetti moderni*, 2 vols. (Rome, 1730-36; facs. ed., Amsterdam, 1965), II, pp. 555-558, here p. 555: "Ella già vede signor maestro, ch'egli è tutto tirato sull'ultimo moderno buon gusto. M'è convenuto rifarlo cento volte, e voglio a pezzo a pezzo modellarlo, acciò la fabbrica non se ne scosti puntino..."; cited in English translation by B.L. La Penta in PORTOGHESI, *Roma Barocca*, p. 315. See also M. LORET, "Attività ignota di Filippo Juvarra a Roma," *La Critica d'Arte* VII (April 1936), pp. 198-201, here p. 198; MILLON, "Juvarra and Architectural Education," p. 42; and IDEM., "Juvarra and the Accademia," p. 19.

My boy, you're on a bad road. You can leave your curves and bends and twists to the carpenters, furniture makers, carriage makers, chair makers, banner makers, decorators of festivals, and makers of toy altars for children, because, on occasion, they can really use them, much more than we architects. Buildings are different from chests, prie-dieus, carriages, chairs, bed canopies and festival decorations, and they require greater solidity, grandiosity, majesty and nobility. These triangular, hexagonal and octagonal forms of yours make buildings minute, graceless, wretched, emaciated and monstrous. Façades of churches must not be decorated like those of palaces, nor should houses have entryways like monasteries, nor should rooms be decorated in a style suitable to altars...¹²⁴

Contini counseled his hapless charge to take a look at the façades of St. Peter's, Sant'Andrea della Valle, Il Gesù, Santa Martina, Santa Maria in Via Lata, and Santa Susanna, and to try to imitate them so as not to appear ridiculous. He then poured his venom out against what he considered to be the corrosive effect of Borromini's influence:

And you poor, wretched, presumptuous little chatterbox, babbling little parrot, do you intend to pass as a great man among them [the Roman commonfolk]? And you, insignificant runt of a dabbler and architect fashioned from donkey dung, come just the other day from the pigsties with three cents worth of clothes on your back, do you think you've come to the metropolis of the world to play the little Borromini?¹²⁵

¹²⁴ PASCOLI, *Vite de' pittori*, II, pp. 557-558: "Figliuol mio voi siete per una cattiva strada, e lasciar potreste agli ebanisti, a' falegnami, a' carrozzaj, a' sediar, a' festajuoli, a' bandarari, ed agli altarini de' fanciulli coteste vostre tante centine, centinati, e centinature; perchè a loro, quando veramente convenevoli fossero, potrebbero piucchè a noi architetti adattarsi, e convenire. Le fabbriche son ben differenti da' canterani, dagl' inginocchiatoj, dalle carrozze, dalle sedie, da' paramenti delle feste, e da' cieli de' letti, e richiedono maggior sodezza, grandiosità, maestà, e signoria. E coteste vostre forme triangolari, esagonali, e ottagonali le fan essere minute, gosse, meschine, secche arrabiate, e mostruose. Le facciate delle chiese ornar non si devono, come quelle de' palazzi, nè fare alle case gli androni conforme a' monasteri, ned a modo d'altari arricchir d'ornamenti le camere..."; cited in English translation by B.L. La Penta in PORTOGHESI, *Roma Barocca*, p. 315. See also MILLON, "Juvarra and Architectural Education," p. 42; and IDEM., "Juvarra and the Accademia," p. 19.

¹²⁵ PASCOLI, *Vite de' pittori*, II, p. 558: "E voi disgraziatello, presuntuosetto, chiacchierino, papagalluccio vi date ad intendere di passare tra essi per un grand'uomo? E voi

With that he held up the drawing before the other students and vowed that if ever again anyone of them should follow such a path he would be immediately thrown out of school in order to avoid infecting the others with any such disease.

Juvarra's biographer, Scipione Maffei, reports a similar incident involving Fontana and Juvarra upon the latter's arrival in Rome in 1704.¹²⁶ Seeking entry into Fontana's studio, Juvarra was subjected to a test by the master who, wishing to gauge Juvarra's ability, required of him a palace design which Juvarra quickly produced.¹²⁷ After examining the drawing, Fontana told Juvarra that if he wished to become his student he must unlearn everything. He then sent Juvarra away to draw the Palazzo Farnese or any other honorable building, "as long as it be simple," counseling him to adhere always to simplicity in buildings, and assuring him that on account of his keen talent his designs would never suffer from insufficient ornament. What displeased Fontana about Juvarra's palace design then was its excessive ornament and, presumably, its too many Borrominesque elements derived from Juvarra's previous contact with Guarini's work in Messina.¹²⁸ These two

infarinatucolo, dottorichio, architettuzzolo di feccia d'asino venuto jerlatro dalle trojate con tre quattrini di panni indosso credete di fare nella metropoli del mondo il Borrominello?"; cited also in English translation by B.L. La Penta in PORTOGHESI, *Roma Barocca*, p. 315. See also MILLON, "Juvarra and Architectural Education," p. 42; and IDEM., "Juvarra and the Accademia," p. 19.

¹²⁶ MAFFEI, "Elogio del signor abate," [reprinted in ROVERE/VIALE/BRINCKMANN, *Filippo Juvarra*, pp. 18-21; and in VIALE, ed., *Mostra di Filippo Juvarra*, pp. 18-21]. See also the partial English transcription in MILLON, "Juvarra and Architectural Education," pp. 29-30; and IDEM., "Juvarra and the Accademia," p. 14.

¹²⁷ On Juvarra's arrival in Rome and entry into Fontana's studio, see A. BARGHINI, *Juvarra a Roma – Disegni dall'atelier di Carlo Fontana* (Turin, 1994), a source I was unable to consult.

¹²⁸ MILLON, "Juvarra and Architectural Education," p. 43; IDEM., "Juvarra and the Accademia," p. 19.

incidents bear testimony to the cultural battle which was beginning to rage within the Roman architectural ambient at the turn of the century, between those who championed traditional classical orthodoxy and academic rules and those who promoted modern invention and a spirit of innovation.

Borrominian principles of design were promoted by “modern” architects such as Giovanni Antonio Gherardi (1638-1702), Andrea Pozzo (1642-1709), and Giuseppe Sardi (1680-1755) in the face of strong academic opposition. Pozzo recorded his endorsement of the values of invention and variety in the second volume of *Perspectiva pictorum* (1700):

And here I must make an apology for me and the modern architects, who for certain variations of theirs in architecture are held in little esteem, since they do not completely follow the ancient style; I do not mean in its basic substance, which everyone wants kept intact, but in its profiles and ornaments. The petty and the wretched make of these men the most common objects of popular satires and gossip. But that should not bother them, because in this they suffer the same fate that all illustrious men have suffered, until through their outstanding merit they rise so high that they cannot be offended by malicious envy. I could give many examples of this, but not to stray from the present subject, it is enough to mention the famous architect Borromini, who flourished in the last century. His works are admired today just as much as they were then censured and enviously maligned for their invention and variety. Therefore let us be of good spirit, because with the passing of time the value of these men will be discovered, as will the malevolence of their rivals.¹²⁹

By the early decades of the eighteenth century a revived taste for Borromini’s architecture had established itself in Rome, a taste notable for its unorthodoxy and freedom of expression. In spite of censures by Contini and Fontana, the

¹²⁹ POZZO, *Perspectiva pictorum*, II; cited in English translation by B.L. La Penta in PORTOGHESI, *Roma Barocca*, p. 306.

Borrominian undercurrent was strong enough to surface even at the Accademia di San Luca.¹³⁰ In the *Concorso Clementino* of 1702, for example, the measured drawing exercises set for the Third Class competition in architecture called for a plan and elevation of one of Borromini's twelve niches lining the nave of San Giovanni in Laterano.¹³¹ And in 1710 and 1711, the very time when Juvarra was teaching design and perspective at the Accademia, the measured drawing requested for each of those years was of a work by Borromini.¹³² Juvarra himself studied and drew Borromini's buildings: San Giovanni in Laterano, Sant' Agnese in Piazza Navona, Sant' Andrea delle Fratte, Palazzo Barberini, Palazzo Falconieri,¹³³ and in a passage written in his later years, Juvarra confirms the importance of Borromini on his own work:

¹³⁰ H. HAGER, "Introduction," in S.S. Munshower, ed., *Architectural Fantasy and Reality. Drawings from the Accademia Nazionale di San Luca in Rome, Concorsi Clementini 1700-1750* (University Park, 1982), pp. 1-6, here p. 4, infers from the material of the architectural competitions demonstrates that students of the Accademia were avidly seeking sources of inspiration, and that the "Borrominian alternative" served as a primary source. Fontana himself, for a brief time and at a very early stage of his practice (ca. 1670), had experimented with a Borrominesque manner of design; see IDEM., "Die Kuppel des Domes in Montefiascone zu einem borrominesken Experiment von Carlo Fontana," *Römisches Jahrbuch für Kunstgeschichte* XV (1975), pp. 145-161. By the beginning of the eighteenth century, however, all traces of Borrominian influence had been exorcised from his work. Still, as SMITH, *Architectural Diplomacy*, p. 355, note 107, points out, Fontana promoted a measure of freedom in his studio and encouraged his students to strike out in other directions, this in contrast to Contini who was much less tolerant of the Borrominian license taken by his students.

¹³¹ This *soggetto* may have been inspired by Pope Clement XI's decision to place large marble statues of the twelve apostles in the niches; see MILLON, "Juvarra and Architectural Education," p. 43; and IDEM., "Juvarra and the Accademia," p. 19. On the Third Class competition of the *Concorso Clementino* of 1702, see MARCONI/CIPRIANI/VALERIANI, *I disegni*, I, pp. 5, nos. 78-81, figs. 78-81.

¹³² The measured drawing exercise for 1710 was for a door from the convent of San Carlo alle Quattro Fontane (IBID., I, p. 10, nos. 240-241, figs. 240-241), and the exercise for 1711 was for the door of black stone in the cloister of the Chiesa Nuova (IBID., I, p. 11, nos. 259-261, figs. 259-261).

¹³³ H.A. MILLON, *Filippo Juvarra. Drawings from the Roman Period, 1704-1714, Part I* (Rome, 1984), I, p. xvii, note 42.

But it is not that I have neglected ornament or embellishment. I have used it in moderation and I have endeavored with all my strength to imitate in this the style of Cavalier Borromini.¹³⁴

It is evident to Henry Millon, from this statement and from Juvarra's drawings and later work, that Juvarra was much influenced by Borromini's architecture, not only during his days as a student and teacher at the Accademia, but throughout his career.¹³⁵ Indeed, Juvarra's designs from his Roman period reveal that he took as much interest in the architecture of Borromini as in that of Bernini.¹³⁶ Millon also suggests that growing interest in Borromini among students at the Accademia was nurtured by Juvarra himself and other progressive members of the faculty.¹³⁷ Two architects in particular, Pietro Passalacqua (1690-1748) and Domenico Gregorini (1692-1777), both of whom designed in a Borrominesque manner, had been students at the Accademia during the period between 1707 and 1713 when Juvarra taught there.¹³⁸ Hager writes:

¹³⁴ The passage is located in an album of drawings in the Biblioteca Nazionale in Turin entitled *Studio di architettura civile sopra gli ornamenti porte e finestre*, and dated 24 December 1725. It is quoted in English translation by MILLON, "Juvarra and Architectural Education," p. 43; and IDEM., "Juvarra and the Accademia," p. 19, note 74 on p. 22.

¹³⁵ IDEM., "Juvarra and Architectural Education," p. 43; IDEM., "Juvarra and the Accademia," p. 19.

¹³⁶ See F. FICHERA, "Juvara tra Bernini e Borromini," *Quadrivio, Grande settimanale letterario illustrato di Roma* III:49 (6 October 1935), p. 3.

¹³⁷ MILLON, "Juvarra and Architectural Education," pp. 43-45; IDEM., "Juvarra and the Accademia," pp. 19-20.

¹³⁸ Gregorini won first prize in the Second Class competition of the *Concorso Clementino* of 1713 for a tabernacle for a major altar; see MARCONI/CIPRIANI/VALERIANI, *I disegni*, I, p. 12, nos. 278-280, figs. 278-280. Passalacqua twice won second prize in the First Class competition of the *Concorso Clementino* — the first in 1710 for a villa on a pentagonal plan (IBID., p. 10, nos. 229-232, figs. 229-232), and the second in 1713 for a round temple with a portico (IBID., p. 11, nos. 268-270, figs. 268-270). Passalacqua, like Juvarra, hailed from Messina. On Passalacqua's apprenticeship, see T. MANFREDI, "L'arrivo a Roma di Filippo Juvarra e l'apprendistato di Pietro Passalacqua nella cronache domestiche di una famiglia messinese," *Architettura, Storia e documenti* 1-2 (1989), pp. 109-116.

...the surviving material of the architectural competitions testifies vividly that the “Borrominian alternative,” [...] experienced its “revival” as well. Even the architects such as Carlo Fontana and later, Ferdinando Fuga, were very often open to the influence of Borromini’s innovations. The same can certainly be observed of the students at the Academy who, especially during the competitions, were avidly searching for sources of inspiration.¹³⁹

Borromini’s architecture continued to command the interest of students at the Accademia well into the 1720s. In 1724 Ludovico Rusconi Sassi (1678-1736), whose older relative Matteo Sassi had apprenticed in Carlo Fontana’s studio, offered to the Accademia, as his *dono accademico*, a design for a church façade modeled after Borromini’s façade of San Carlo alle Quattro Fontane.¹⁴⁰ Several years later Rusconi Sassi designed another innovative reinterpretation of San Carlo alle Quattro Fontane, the church of San Giuseppino alla Lungara (1728-34), which was undergoing construction during the very years when Vittone was enrolled in the Accademia di San Luca.¹⁴¹

Growing interest in Borromini culminated in the posthumous publication of his *Opus Architectonicum* in two volumes, the first in 1720 and the second in 1725.¹⁴² Vittone himself appears to have encountered this treatise at an early date, and may have even been familiar with it before he left

¹³⁹ HAGER, “Introduction,” in *Architectural Fantasy*, p. 4.

¹⁴⁰ See OECHSLIN, “Il soggiorno,” p. 399, note 4, fig. 4; MARCONI/CIPRIANI/VALERIANI, *I disegni*, II, p. 9, no. 2183, fig. 2183; MUNSHOWER, ed., *Architectural Fantasy*, pp. 157-161, fig. XIV-76; and SMITH, *Architectural Diplomacy*, p. 199, fig. 145. On Rusconi Sassi and his church façades, see also H. HAGER, “Il modello di Ludovico Rusconi Sassi del concorso per la facciata di S. Giovanni in Laterano (1732) ed i prospetti a convessita centrale durante la prima metà del Settecento a Roma,” *Commentari* XXII (1971), pp. 36-67.

¹⁴¹ PORTOGHESI, *Roma Barocca*, fig. 397. Borromini’s influence manifested itself in Rusconi Sassi’s work at an early date as indicated already in his prize-winning project for the *Concorso Clementino* competition of 1702; see CIPRIANI, ed., *Æqua Potestas*, pp. 125-127, nos. IV.4 – IV.6.

¹⁴² The first volume of Borromini’s *Opus Architectonicum* is concerned with the Sapienza and the second volume with the Oratory of the Filippini.

Piedmont for Rome in 1731. For example, in his 1728 design for the *coretti* in the Oratory of San Giovanni Decollato (now the Misericordia) in Turin, discussed above as evidence of Vittone's early association with Juvarra's workshop, Vittone animates the arch and the balcony with a convexity that suggests to Richard Pommer a specific knowledge of, and response to, *Opus Architectonicum*.¹⁴³ Borromini's treatise is also echoed in some of the illustrations in Vittone's architectural treatises. For example, Vittone's frontispiece to *Istruzioni elementari* features ancient Roman ruins, complete with the Colosseum and Trajan's Column (Figure 1.17), as they appear exactly in the frontispiece to *Opus Architectonicum* (Figure 1.18).¹⁴⁴ The allusion to Borromini's frontispiece is even more telling in Vittone's academic sketch of the 1730s (Figure 1.19) that itself had served as the direct model for the frontispiece to *Istruzioni elementari*. In addition, Vittone's project for the church of the Chierici Regolari degli Infermi in Turin as illustrated in *Istruzioni diverse* features a dome with a stepped extrados that recalls Borromini's dome of Sant'Ivo alla Sapienza as illustrated in *Opus Architectonicum*.¹⁴⁵

¹⁴³ POMMER, "A Note on Santa Marta," p. 385. For a different view, see CAVALLARI MURAT, "L'architettura sacra," p. 38, who suggests that Vittone acquired his copy of *Opus Architectonicum* during his Roman sojourn.

¹⁴⁴ The dependence of Vittone's frontispiece upon Borromini's frontispiece is noted by OECHSLIN, "Il soggiorno," p. 411; IDEM., *Bildungsgut*, p. 32, 144, note 59 on p. 189, figs. 58, 60. Vittone's frontispiece was designed and engraved in 1738 by Vittone's employee, Giovanni Antonio Belmondo, as indicated by the accompanying inscription: "Frontispizio per un libro d'architettura. Con le figure allegoriche dell'Architettura e del Disegno; in fondo il Colosseo ecc. 'Gio. Ant. Belmondo inv. et sculp. in Torino 1738,'" cited by BAUDI DI VESME, *Schede Vesme*, I, p. 113.

¹⁴⁵ VITTORE, *Istruzioni diverse*, pl. 56. On the debt of Vittone's project to Sant'Ivo, see CARBONERI/VIALE, eds., *Bernardo Vittone architetto*, p. 28, no. 56, fig. 91; OECHSLIN, "Il soggiorno," p. 411, fig. 43; IDEM., *Bildungsgut*, p. 144, note 58 on p. 189. The stepped dome of Sant'Ivo, as illustrated in *Opus Architectonicum*, proved popular not only with Vittone but also with other architects practicing in Rome during the late 1720s, including Paolo Posi, with his prize-winning project for the Second Class competition of the *Concorso Clementino* of 1728, and Girolamo Theodoli, with his for Santi Marcellino e Pietro in Rome (1728-52). See MARCONI/

According to Bianca Tavassi La Greca, the influence of *Opus Architectonicum* on Vittone's production was not limited to illustrations, but extended even to the methodological approach adopted in the architectural text itself.¹⁴⁶ She concludes that *Opus Architectonicum* is neither a true theoretical formulation nor a poetical declaration, even if one or the other can be read between the lines, but basically a "captivating narration of a building programme" explaining how the Oratory of the Filippini was constructed. Something of the same approach, she argues, was later adopted by Vittone himself who, in a tract of *Istruzioni diverse* devoted to a description of his own buildings, informs the reader of problems encountered during construction and how these were overcome by practical means.¹⁴⁷ In short, according to

CIPRIANI/VALERIANI, *I disegni*, I, p. 14, no. 348, fig. 348; HAGER, "Gian Lorenzo Bernini," pp. 476-481, figs. 10-11; and MATTEUCCI, *L'architettura del Settecento*, p. 22 (bottom left figure).

¹⁴⁶ B. TAVASSI LA GRECA, "Considerazioni sull'opera teorica di Bernardo Vittone. Guarini / Vittone: una linea teorica di continuità o di frattura?" *Storia dell'Arte* LXIV (1988), pp. 249-284, here pp. 254-260.

¹⁴⁷ These problems generally concerned constraints and difficulties associated with the site and with construction costs. For example, Vittone tells us that the irregularity, narrowness, insufficient size, insufficient illumination, and/or the pre-existing structures of a site determined his designs for a good many church and church projects, including the façade of San Francesco in Turin (*Istruzioni diverse*, p. 173), the façade of Santi Vincenzo e Anastasio (IBID., p. 1), the Theatine church and college of San Gaetano at Nice (IBID., p. 175), the chapels conceived for the church of the Certosa at Casotto (IBID., p. 176), the unexecuted project for the church and college of the Chierici Regolari degli Infermi in Turin (IBID., pp. 177-178), the unexecuted project for the parish church at Villafalletto (IBID., p. 179), the parish church of Santa Maria della Neve at Pecetto (IBID., p. 179), the parish church at Spigno (IBID., p. 180), the parish church of San Marco in Turin (IBID., p. 180), Santa Maria di Piazza in Turin (IBID., pp. 180-181), the renovated presbytery of Sant'Antonio Abate in Turin (IBID., pp. 182-183), San Bernardino at Chieri (IBID., p. 182), Santa Chiara in Turin (IBID., p. 183), the unexecuted project for San Francesco at Nice (IBID., p. 183), the unexecuted project for Santa Chiara at Alessandria (IBID., p. 184), and Santa Maria Maddalena at Alba (IBID., p. 185). Vittone also tells us that for several commissions he was required to minimize building expenses and incorporate every possible cost saving measure, and that this requirement determined his designs for the parish church at Montalto Rovero (IBID., p. 179), his unexecuted project for the parish church at Villafalletto (IBID., p. 179), and the church of Santa Croce at Villanova di Mondovì (IBID., pp. 181-182). On Vittone's designs and innovations made in response to the site and cost constraints of his commissions, see B. TAVASSI LA GRECA, *Bernardo Antonio Vittone, architetto e teorico del '700*, edited by P. Torniai (Rome, 1985), pp. 13-17.

her view, Vittone borrowed Borromini's method, a "diary of work," and expanded it to cover a whole range of buildings.¹⁴⁸

Vittone also drew upon Borromini's designs as illustrated in Domenico De Rossi's *Studio d'architettura civile*, another book that he owned and presumably bought in Rome. For example, Vittone adapted one of the windows of Borromini's Oratory of the Filippini (as illustrated by De Rossi) to several of his own designs for portals conserved in the Musée des Arts Décoratifs in Paris.¹⁴⁹ And he adapted the same Borrominian window to his design for a portal in San Benigno Torinese.¹⁵⁰

While at the Accademia di San Luca Vittone also saw and studied Borromini's architecture first hand, drawing upon Sant' Agnese in Piazza Navona among numerous other sources for his design for a *Temple of Moses* that he submitted as his *dono accademico* to the Accademia.¹⁵¹ In this Vittone followed the example of Juvarra who, for his own *dono accademico* of 1707, drew upon the same Borrominian source (Figure 1.6).¹⁵² It was at the Accademia that Vittone encountered the late manifestation of the Borrominian revival.¹⁵³ Vittone's contact with the Borrominian school, however, seems to

¹⁴⁸ IBID., p. 11; IDEM., "Considerazioni," p. 254.

¹⁴⁹ Paris, Musée des Arts Décoratifs, I, nos. 70, 71, 129. See OECHSLIN, "Vittone e l'architettura," pp. 35-36, figs. 9-a, 9-b, 9-c.

¹⁵⁰ OECHSLIN, "Vittone e l'architettura," pp. 35-36, fig. 10-a.

¹⁵¹ IDEM., "Tempio di Mosè," p. 170; IDEM., "Il soggiorno," p. 412, note 2; IDEM., *Bildungsgut*, p. 152. The connections between Vittone's *Temple of Moses* project and both the Karlskirche and Juvarra's *dono accademico* project have been discussed above. See HAGER, Review of *Bildungsgut*, p. 816, who draws an additional connection between Vittone's *Temple of Moses* project and designs from the *Concorso Clementino* of 1725 (especially the designs by the winner of the third prize that year, Gaetano Fabrizzi).

¹⁵² OECHSLIN, "Il soggiorno," p. 404, note 4, p. 412; IDEM., *Bildungsgut*, p. 152.

¹⁵³ PORTOGHESI, *Bernardo Vittone*, pp. 89-95.

have been limited to his study of the works of Borromini himself and to those of Juvarra, Gherardi, and perhaps Sardi. There is little if any evidence of Vittone's connections to the Roman architects of his own generation who designed in the Borrominian manner, notably Alessandro Specchi (1666-1729), Francesco De Sanctis (1679-1731), Filippo Raguzzini (ca. 1680-1771), Pietro Passalacqua (1690-1748), and Domenico Gregorini (1692-1777).¹⁵⁴ Even when Vittone produced a variation on the Spanish Steps (Figure 1.20),¹⁵⁵ for example, he modeled it not after De Sanctis's executed version of the 1720s, but after Elpidio Benedetti's much earlier design of the 1660s (Figure 1.22).¹⁵⁶ In its play of curve and counter-curve, Vittone's steps also bear a striking resemblance to a project for a concave and convex "teatro" conserved in the archive of the Accademia di San Luca, namely Antonio Canevari's project for the Bosco Parrasio (1725) itself drawn up at the very time when De Sanctis's Spanish Steps were undergoing construction (Figure 1.23).¹⁵⁷

Borrominian motifs continued to inform Vittone's architecture well after his return to Piedmont. The façade of his church of Santi Vincenzo ed

¹⁵⁴ MILLON, "Alcune osservazioni," p. 151.

¹⁵⁵ VITTONI, *Istruzioni diverse*, pl. 22. See FAGIOLO, "L'universo," fig. 44; OECHSLIN, "Il soggiorno," fig. 54; and IDEM., *Bildungsgut*, fig. 8.

¹⁵⁶ Biblioteca Apostolica Vaticana, Chigi P VII 10, fol. 30v-31r. On Benedetti's project, see T.A. MARDER, "Bernini and Benedetti at Trinità dei Monti," *The Art Bulletin* LXII:2 (June 1980), pp. 286-289; and IDEM., "The Decision to Build the Spanish Steps: From Project to Monument," in Hager and Munshower, eds., *Projects and Monuments*, pp. 82-99, here pp. 85-86, fig. 5-h.

¹⁵⁷ On Canevari's project, see MARCONI/CIPRIANI/VALERIANI, *I disegni*, II, p. 7, nos. 2120-2121, figs. 2120-2121; P. PETRAROIA, "Il Bosco Parrasio," in *Il Teatro a Roma nel Settecento*, 2 vols. (Rome, 1989), I, pp. 173-198, figs. 1-2; G. CURCIO and E. KIEVEN, eds., *Storia dell'architettura italiana: il Settecento*, 2 vols. (Milan, 2000), I, pp. 174-175; PINTO, "Architecture and Urbanism," pp. 125-126; DARDANELLO, ed., *Sperimentare*, pp. 187-188; S.M. DIXON, *Between the Real and the Ideal: The Accademia degli Arcadi and Its Garden in Eighteenth-Century Rome* (Newark, 2006); and V.H. MINOR, "Arcadia e Bosco Parrasio," in C. Ruggero, ed., *La forma del pensiero: Filippo Juvarra: la costruzione del ricordo attraverso la celebrazione della memoria* (Roma, 2008), pp. 61-70 (text in English).

Anastasio at Cambiano (1740-41), for example, features an array of convexities and concavities, jagged angles, and broken pediments, which identifies it as a descendent of Borromini's façade of San Carlo alle Quattro Fontane, although its immediate source of inspiration appears to have been Ludovico Rusconi Sassi's Neo-Borrominian design for a church façade presented to the Accademia in 1724.¹⁵⁸ In addition, many of Vittone's centrally planned churches — from his very first one at Vallinotto (1738-39) to his very last one at Borgo d'Ale (1770-80) — feature a triangular-hexagonal plan derived from Borromini's Sant'Ivo alla Sapienza.

The impact of the Borrominian revival on Vittone's architectural formation is discernable above all in Vittone's affirmation of invention and variety, which he makes in this remarkable passage from *Istruzioni elementari*:

The genius of the Architect must none the less be free, and however well those worthy Architects of old may have wisely conceived and accomplished what they devised, still, it should not be thought that they have attained perfection in all things whereby their successors cannot achieve better works. No, that person is wrong who is convinced that the thoughts of architects cannot be improved upon in any way. No, one cannot believe that the source of invention is closed to the new Moderns and their Successors...¹⁵⁹

¹⁵⁸ VITTORE, *Istruzioni diverse*, p. 174, pl. 45. OECHSLIN, "Il soggiorno," p. 399, note 1, p. 400, figs. 4-5; IDEM., *Bildungsgut*, p. 138, note 18 on p. 186, identifies the source of Vittone's church façade as Rusconi Sassi's academic design. See also U. CHIERICI, "Appunti sull'architettura alla Mostra del Barocco Piemontese," *Palladio* II (1938-XVI), pp. 55-62, here p. 62, fig. 13, who, without naming a specific precedent, describes the façade of Santi Vincenzo ed Anastasio as a "provincial translation of a Roman church." However, TAVASSI LA GRECA, *Bernardo Antonio Vittone*, p. 7, finds the source of inspiration in the façade of Guarini's Palazzo Carignano in Turin. On Vittone's church façade at Cambiano, see also OLIVERO, *Le opere*, pp. 70, 77; CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 58, no. 142, pl. 139; PORTOGHESI, *Bernardo Vittone*, p. 109, 220-221, pls. 89-90; CARBONERI/VIALE, eds., *Bernardo Vittone architetto*, p. 21, no. 27, fig. 31; GIUDICI/MEMOLI, *La architettura*, pp. 280-282.

¹⁵⁹ VITTORE, *Istruzioni elementari*, pp. 412-413: "Deve per tanto il genio dall' Architetto esser libero, e per quanto bene possano aver pensato, e saviamente nelle cose loro operato gli preandati valenti Architetti, non deve credersi, che colpito abbiano in tutto il meglio: onde

Vittone defends his position by likening the five classical orders of architecture to the musical tones, and by noting that just as there is an infinite variety of combinations of tones, so there is also an infinite variety of combinations of the orders and proportions.¹⁶⁰ The source of invention then, for the architect as for the musician, can never be exhausted. Vittone explains further that, while the origin of architecture was founded on the imitation of the simple form of a poor and rough hut, the progress of architecture has depended upon a fantastic industry that aims to please the genius of the eye in the consideration of new and various objects.¹⁶¹ This is because human intelligence is ever eager for new inventions,¹⁶² and because human necessity

rimasto ne sia attraversato a' successori loro l'adito a migliori produzioni. No, non v' ha ragione, che ci persuada, che migliorare in qualche modo non si possano i loro pensieri; nè non è credibile, che il fonte dell' invenzione chiuso trovisi per gli nuovi Moderni, e loro Posterì..." See also CAVALLARI MURAT, "L'architettura sacra," p. 51; IDEM., "Aggiornamento," p. 501; IDEM., "L'avventura neoguariniana di Vittone," in *Come carena viva, scritti sparsi*, 5 vols. (Turin, 1982), IV, pp. 482-498, here p. 498; FAGIOLO, "L'universo," p. 128; TAVASSI LA GRECA, *Bernardo Antonio Vittone*; p. 12; and IDEM., "Considerazioni," p. 270.

¹⁶⁰ VITTONI, *Istruzioni elementari*, p. 413: "Come alla Musica il Tuoni, servono all' Architettura i suoi Ordini, dimodochè, siccome ogn' un de' Tuoni fisso restando a certe note, e distanze speciali, che gli servon di termini, può colla varia trasposizione delle voci innumerevole varietà di cantilene in se ammettere, e produrre, così pure ogni un degli ordini affetto tenendosi a certi precisi oggetti, e proporzioni, come a speciali suoi termini, può nedesimamente col diverso assortimento de' suoi Elementi infinita varietà di componimenti in se ricevere, ed adottare." See also TAVASSI LA GRECA, *Bernardo Antonio Vittone*, p. 12.

¹⁶¹ VITTONI, *Istruzioni elementari*, p. 410: "Imperocchè se si considera nella sua origine, a cui necessario è far soccorso nell' aversi a render ragione de' di lei più comuni elementi, altro fondamento non ritrovasi, che l'imitazione della semplice forma d'un povera, e rozza Capanna; se poi nel suo progresso, a cui riferibili sono per la maggiore parte i di lei Prodotti, altro appoggio non si rinviene, che il sentimento non mai appieno costante dell' umana fantastica industria, che intenta a compiacere il genio dell' occhio [italics mine], sulla considerazione de' nuovi, e tutt' ora varj oggetti, che producendo venivansi, accorta resasi, colla produzione d'altri, e più vistosi, e più regolari composti, tutt' ora però conformi a' detti elementi, lasciò in essi come in un specchio espresse quelle poche regole, che di norma poi servirono in ogni tempo agli Architetti per la produzione delle Opere loro anche più ragguardevoli."

¹⁶² IBID., p. 527: "...è facil cosa il credere, che avido, ed ambizioso l'umano ingegno di nuove invenzioni, abbia da ciò preso stimolo ad imitar coll' arte quanto operato vedeva dalla Natura." See also FAGIOLO, "L'universo," p. 151.

and luxury are never satiated by novelty in the production of so many different inventions in architecture.¹⁶³ Moreover, it is by producing new inventions that the architect succeeds in procuring honor and fame for himself.¹⁶⁴ And so Vittone states that it is his purpose in writing *Istruzioni diverse* to awaken the young architect's fantasy and to stimulate new ideas, concepts, and inventions through consideration of the variety and novelty of the buildings and ornaments that he presents in his treatise.¹⁶⁵

Indeed, references to novelty, variety, and new inventions recur throughout Vittone's two treatises.¹⁶⁶ In particular, Vittone singles out for comment the novel and inventive character of several of his own church designs. For example, he introduced hollowed-out pendentives in Santa

¹⁶³ VITTONI, *Istruzioni elementari*, p. 234: "...all' Architettura somministrano le Idee più pure, e d'originale le servono nella produzione delle tante, e tanto diverse invenzioni, che il bisogno, e il fasto Umano non mai sazio di novità da essa richieggono." See also FAGIOLO, "L'universo," p. 127.

¹⁶⁴ VITTONI, *Istruzioni elementari*, p. 236: "Cose tutte, che fra lo stupore, l'Idea a noi conferendo del buon gusto, ci hanno insieme lasciato materia, che degno soggetto resa si è de' nostri studj, e scorta sicura a chi ben la considera, ed a esaminarne prende le simmetrie, per ben pensare, e produrre le nuove invenzioni, con cui honore, e fame procacciarsi in quest' Arte, che è quella, in cui più che in ogni altra la maestà delle Corti, lo splendore, e la magnificenza de' Sovrani, e l'indole de' Popoli manifesti al Mondo si rendono." See also FAGIOLO, "L'universo," p. 130.

¹⁶⁵ VITTONI, *Istruzioni diverse*, Preface, pp. XI-XII: "Nè crederei già d'ingannare me stesso al persuadermi, che so, considerando la varietà colla novità insieme de' pensieri, che in ogni genere ho qui, e di Fabbriche, e d'Ornamenti concerto; che v'abbia, chiunque vorrà di queste Produzioni far uso, a trovar cosa valevole a svegliargli fantasia; così che sia per riuscire a lui facile nelle occasioni, che presentar se gli possono, all' escogitazione eccitarsi di nuove leggiadre idee, e di concetti all' esigenza adattabili dell' occorrente bisogno."

¹⁶⁶ IDEM., *Istruzioni elementari*, p. 344: "...si possa quindi prender lume per ben maneggiarsi nel aver in tal genere a produrre cosa di nuova invenzione."; p. 472: "...dotandoli di novità, senza tuttavia eccedere i limiti della leggiadria, utilità, e permanenza."; IDEM., *Istruzioni diverse*, p. 157: "...che alla mente stessa ne avviene per la varietà, e novità delle idee..."; 162: "Si è questa qui rapportata per la novità dell' idea parsa a me non dispregevole..."; p. 182: "...de' quali d'uopo era servirsene per la nuova..."; p. 188: "...cosa, che per l'ampiezza, e varietà dello spazio, che all' occhio presenta, e per il comodo, che a lui dà di vagamente spaziare per esse, massimamente anche pure per la disposizione, e per gli ornamenti, di cui vanno dotate, non può a mio intendere, che riuscire ad esso di tutta sua e soddisfazione, e compiacimento."

Croce at Villanova di Mondovì, he explains, in order to satisfy the desire for both novelty and charming playfulness demanded of his clients, the Confratelli Disciplinanti.¹⁶⁷ He designed the dome of San Bernardino at Chieri in a lightweight form that, he boasts, is very different from the usual style.¹⁶⁸ He proudly states that his two designs for a parish church “to be built in a place not having too large a population” are not lacking in sufficient arrangements and ornaments which, on account of the novelty of elements they contain, are graceful and pleasing to the sight.¹⁶⁹ Finally, in his design for an ideal parish church “to be erected in a very conspicuous place,” Vittone claims to have produced a totally arbitrary design for a dome that is not without playful novelty and bizarreness (*bizzarria*).¹⁷⁰

This favorable reference to bizarreness is further indication of the influence that the Borrominian revival exerted on Vittone’s architectural formation. Indeed, references to bizarreness recur throughout the pages of Vittone’s treatises, with Vittone singling out for comment the bizarre character of several of his designs,¹⁷¹ including those for metalwork,¹⁷² and those for certain doors and windows that produce a pleasing effect on the eye.¹⁷³

¹⁶⁷ IBID., pp. 181-182: “Il desiderio, che gli stessi Confratelli avevano, che formato venisse loro un Vaso dotato di novità, e di scherzosa vaghezza, senza però che fosse per riuscir loro di troppo sensibile dispendio, fu il motivo, che m’indusse a lasciar da parte ogni sorta Cupola, e Bacile, ed escogitare l’idea, che quivi vedesi espressa. Giovar può fra il resto ivi osservare l’interruzione, che fatta si è delle Vele, per formare que’ scavi quasi in forma di Nicchioni...”

¹⁶⁸ IBID., p. 182: “La Cupola, che sopra vi è eretta, e cui stimai tenere leggera, non poco scostasi nella sua forma dallo stile comune.”

¹⁶⁹ IBID., p. 185: “Non poco hanno tali idee del semplice, del regolare, e del comodo, non mancando tuttavia di quella disposizione, e di quei ornamenti, che render le posson leggiadre, e per la novità, di cui dotate vanno, aggradevole.”

¹⁷⁰ IBID., p. 187: “Non senza nuovità di scherzo, e bizzarria formata n’ è la Cupola...”

¹⁷¹ IDEM., *Istruzioni elementari*, p. 411: “...e fissa l’attenzione di chi s’appiglia a tal Professione, che alla politezza, e bizzaria del disegno, quasi che in questo, e non nelle Regole, e

In addition to having absorbed the lessons of Borromini's architecture during his study at the Accademia di San Luca, Vittone also developed a deep and abiding appreciation for Bernini's architecture acquired directly by a study of Bernini's buildings and indirectly by a study of designs by Bernini's successors, above all Fontana and Fischer von Erlach.¹⁷⁴ Vittone enjoyed ready access to the collection of drawings from Bernini's workshop which by that time was housed in the Accademia's archive. There he would have encountered, for example, a mid-seventeenth-century project for the Pincio attributed to Elpidio Benedetti, but designed in all probability by Bernini himself (Figure 1.22),¹⁷⁵ a project that, as suggested above, Vittone took as the immediate model for his own design for a monumental stairway published in *Istruzioni diverse* (Figure 1.21).¹⁷⁶ Vittone also studied Bernini's designs illustrated in Domenico De Rossi's *Studio d'architettura civile*, including Bernini's project for the façade of the tribune of Santa Maria Maggiore on

cognizioni..."; p. 472: "...poichè ben conosco quanto sieno nella varietà, e bizzaria loro indeterminati gli accidenti de' siti, e le idee, che generate venir posson nella mente di quelli..."; p. 501: "...ma non sendo mio pensiero il dire di tutte le specie di Volte, che può la bizzaria degli Architetti per composizione produrre..."; IDEM., *Istruzioni diverse*, p. 112: "Soggiunge in oltre fare natura sì bizzarra delle crete, a lui dare, essere elle uno da que' terreni, fu de' quali poco è da fidare il fondarvi Edificio alcuno considerabile..."

¹⁷² IBID., p. 159: "...e dalla varietà loro accompagnata da scherzosa bizzarria..."

¹⁷³ IBID., p. 155: "Varj Disegni di Porte, e Finestre ... tutt' ideati uniformemente ad altri cosimili già da me estratti da Fabbriche di buoni Autori, ed osservati sortire in opera un effetto assai piecevole all'occhio; accidente questo, cui non v'ha dubbio procedere non già tanto dalla bizzaria, e vaghezza della composizione, quanto anche del bello assortimento, che e nella forma, e nelle proporzioni delle parti a conseguire ne viene il complesso."

¹⁷⁴ On the Berninian character of Fischer von Erlach's work, see M.C. BUSCIONI, "Matrici berniniane nell'opera di Johann Bernhard Fischer von Erlach," in Spagnesi and Fagiolo, eds., *Gian Lorenzo Bernini*, II, pp. 661-672; and H. LORENZ, "Bernini e l'architettura barocca austriaca," in Spagnesi and Fagiolo, eds., *Gian Lorenzo Bernini*, II, pp. 641-660.

¹⁷⁵ Biblioteca Apostolica Vaticana, Chigi P VII 10, fol. 30v-31r. See MARDER, "Bernini and Benedetti," pp. 286-289; and IDEM., "The Decision to Build," pp. 82-99; fig. 5-h.

¹⁷⁶ VITTORE, *Istruzioni diverse*, pl. 22. See FAGIOLO, "L'universo," fig. 44; OECHSLIN, "Il soggiorno," fig. 54; and IDEM., *Bildungsgut*, fig. 8.

which Vittone partially modeled his church designs for the *Concorso Clementino* project of 1732.¹⁷⁷ In addition, as Oechslin observes, Vittone drew upon Bernini's colonnade at St. Peter's, among numerous other sources discussed above, for his 1733 design for the *Temple of Moses*.¹⁷⁸ Vittone's esteem for Bernini's architecture is made evident also by his inclusion of the Scala Regia in both *Istruzioni elementari* and *Istruzioni diverse*, one of very few modern works of architecture to appear in both treatises.¹⁷⁹

Bernini, himself a celebrated member of the Accademia di San Luca,¹⁸⁰ had been the accomplished master of a grand but academic brand of classical architecture (exemplified by Santa Bibiena in Rome and San Tomaso di Villanova at Castelgandolfo) as well as the brilliant virtuoso of a spectacular species of scenographic architecture (exemplified by the Cornaro Chapel in Santa Maria della Vittoria and Sant'Andrea al Quirinale, both in Rome). This split in Bernini's work between restraint and spectacle, between convention and innovation, was bequeathed to the Accademia di San Luca. And so Fontana and Contini, two of Bernini's most successful students and two of the

¹⁷⁷ OECHSLIN, "Tempio di Mosè," p. 170; IDEM., "Il soggiorno," p. 411, figs. 45-46; IDEM., *Bildungsgut*, pp. 144, 153.

¹⁷⁸ IDEM., "Tempio di Mosè," p. 170.

¹⁷⁹ VITTONI, *Istruzioni elementari*, p. 455, pl. 78, no. 15: "...fra i quali avvi in Roma quello della Scala Regia in Vaticano..."; IDEM., *Istruzioni diverse*, p. 154, pl. 20: "...la magnifica famosa Scala del Palazzo Vaticano... Essendosi in questo caso il Cavaliere Bernino, che ne fu l'Architetto..." See also OLIVERO, *Le opere*, p. 68; CAVALLARI MURAT, "Aggiornamento," fig. 56. The only other modern works to receive mention in both treatises are the Palazzo Barberini in Rome (*Istruzioni elementari*, pp. 303, 355, 390, 455; *Istruzioni diverse*, p.153), the Palazzo Farnese at Caprarola (*Istruzioni elementari*, pp. 304, 305, 355, 382, 389, 438, 455; *Istruzioni diverse*, p.152), the Palazzo Madama in Turin (*Istruzioni elementari*, pp. 285, 391, 455; *Istruzioni diverse*, p.154), the Palazzo Ranuzzi at Bologna (*Istruzioni elementari*, p. 455; *Istruzioni diverse*, pp. 150, 151), and St. Peter's in the Vatican (*Istruzioni elementari*, pp. 328, 357, 363, 490, 603, 509-515, 603; *Istruzioni diverse*, pp. 153, 255).

¹⁸⁰ See L. PIROTTA, "Gian Lorenzo Bernini principe dell'Accademia di San Luca," *Strenna dei Romanisti* XXIX (1968), pp. 295-305.

most powerful and influential members of the Accademia during the late seventeenth and early eighteenth centuries, promoted a formalized and sober brand of classical architecture while simultaneously producing ephemeral and scenographic decorations of exceptional fancy and novelty. The distinction between buildings and festival decorations remained inviolate, however, the former requiring, in the words of Contini, “greater solidity, grandiosity, majesty and nobility” than the latter.

Under Juvarra, and later under Vittone, however, this distinction became blurred to the point that their buildings, far from appearing solid, began to resemble ephemeral and scenographic decorations themselves. Both Juvarra and Vittone drew equally upon Bernini’s scenographic illusionism and Borromini’s unorthodox *bizzarria* for their own designs. And both instinctively recognized that the gulf between the two schools, the Berninian and Borrominian, was not so wide as commonly perceived. After all, Bernini and Borromini themselves had both apprenticed under Carlo Maderno (1556-1629) and both had developed and perfected a number of illusionistic devices, if not invented by Maderno, then certainly popularized by him, namely the perspectival motif and the light chamber. Indeed, the line separating Bernini’s scenographic illusionism from Borromini’s *bizzarria* was not in actual fact so inviolate that eclectic architects such as Gherardi and Juvarra could not cross it at will and produce syntheses of the two, which the young Vittone did not fail to appreciate and imitate.

Vittone’s catholic taste for both the orthodox and the unorthodox, the academic and the innovative, the regulated and the capricious, the traditional and the modern modes of design, an eclecticism inherited from Juvarra, is already manifest in his prize-winning design for the First Class competition at

the *Concorso Clementino* of 1732 in which he drew upon, however tentatively, the divergent works of Bernini, Borromini, Fontana, Fischer von Erlach, Guarini, and Juvarra. Vittone explicitly approves of such eclecticism:

...it is useful to observe the Works of the more ancient Architects who were serious and given little to jest, among them Vitruvius, Alberti and Serlio, as well as those of the more licentious modern ones, less sympathetic to simplicity, who reveal themselves to be Cavalier Borromini and Padre Guarini, those compared with the works of Vignola, Michelangelo, Cavalier Bernini, Carlo Fontana and so many other worthy Architects...¹⁸¹

During the pontificate of Clement XII Corsini (1730-40) a renewed academic classicism, the legacy of Bernini and Pietro da Cortona, won the official sanction of the papal court and the upper aristocracy and swept aside the Borrominian school which, nonetheless, continued for a while to be patronized by the lower aristocracy and bourgeoisie.¹⁸² As represented by the works of Alessandro Galilei (1691-1737), Nicola Salvi (1697-1751), and Ferdinando Fuga (1699-1782), the new academic architecture was characterized by a formality, monumentality, and grandeur more suited to papal ambition than the capricious and idiosyncratic architecture promoted by the adherents of the Borrominian revival. The crucial year was 1732, the same year that Vittone won the *Concorso Clementino* competition at the Accademia di San Luca, when the winning entries of two other major competitions held that year, one for the façade of San Giovanni in Laterano and the other for the

¹⁸¹ VITTONI, *Istruzioni elementari*, p. 412: "...giova osservare le Opere de' più antichi poco allo scherzo intenti Architetti, quali fra gli altri furono Vitruvio, Alberti, e Serlio, e de' più licenziosi, e meno della naturalezza amici moderni, quali si dimostrarono il Cavalier Borromino [sic], ed il Padre D. Guarino [sic], quelle confrontando colle opere del Vignola, del Buonaroti, del Cavaliere Bernino [sic], di Carlo Fontana, e di tanti altri valenti Architetti..."

¹⁸² See KIEVEN, "Revival del Berninismo," pp. 459-468.

Trevi Fountain, were both dominated by the new taste.¹⁸³ This was also the year that Juvarra, at long last, lost the commission for the New Sacristy at St. Peter's, a commission which originally had been offered to him, but one whose importance now required that it be designed in the new style. In the end, the formal, classical, and academic tradition of Bernini and his followers was able to eclipse the Borrominian school because it was "...more easily maintained, with a simpler theoretical base and less revolutionary goals, and [...] was therefore, more easily transmitted..."¹⁸⁴ Neither Juvarra nor Vittone was much affected by the new taste, however, since the former departed Rome in August 1732 and the latter quit there the following April.¹⁸⁵

What then is the significance of Vittone's academic education? The consensus among scholars is that it marked a brief and inconsequential period

¹⁸³ It is significant that Derizet himself, who was involved with the competition for the façade of San Giovanni in Laterano, was a chief promoter of the new classicism. See A. PRANDI, "Antonio Derizet e il concorso per la facciata di S. Giovanni in Laterano," *Roma* 1-2 (1944), pp. 23-31. See also E. KIEVEN, "Rome in 1732: Alessandro Galilei, Nicola Salvi, Ferdinando Fuga," in H. Hager and S.S. Munshower, eds., *Light on the Eternal City, Observations and Discoveries in the Art and Architecture of Rome* (University Park, 1987), pp. 254-276; and IDEM., "Il ruolo del disegno: il concorso per la facciata di S. Giovanni in Laterano," in Contardi and Curcio, eds., *In Urbe Architectus*, pp. 78-123.

¹⁸⁴ MILLON, "Juvarra and the Accademia," p. 20; IDEM., "Juvarra and Architectural Education," p. 44.

¹⁸⁵ Although Vittone did not enter the competition for the façade of San Giovanni in Laterano, he nevertheless drew up a project for it that he later published in *Istruzioni elementari*, p. 443, pl. 74. Vittone's design, however, is characterized by a distinct Neo-Borrominian character at odds with the formal, grand, and monumental classicism inaugurated and promoted by the competition. Vittone imparts a slight concave curvature to the central bay that is set off against the convex curve of the entrance vestibule, the whole flanked by twin towers in a manner that amalgamates aspects of Borromini's architecture, in particular the façades of the Oratory of the Filippini, San Carlo alle Quattro Fontane, the Collegio di Propaganda Fide, and Sant' Agnese in Piazza Navona. See OECHSLIN, "Il soggiorno," pp. 411-412, figs. 49-50, who sees in Vittone's design a combination of the elevation of Michelangelo's Palazzo dei Senatori and the type of slightly concave church façade represented by Fontana's San Marcello al Corso in Rome, Juvarra's Santa Cristina in Turin, Vanvittelli's Annunziata in Naples, and Francesco de Sanctis's Trinità dei Pellegrini. On Vittone's façade project, see also PORTOGHESI, *Bernardo Vittone*, p. 95; OECHSLIN, *Bildungsgut*, p. 137, note 7 on p. 184; and KIEVEN, "Il ruolo del disegno," pp. 115, fig. 44.

of his career, one that, while it may have inspired his literary production, was largely divorced from his subsequent architectural activity and in particular his Guarinesque designs.¹⁸⁶ Indeed, the building designs of Vittone's early practice are characterized by an eccentric and idiosyncratic manner, what Vittone himself termed "*bizzarria*," that appear at odds with academic conventions. And yet it was at the Accademia di San Luca that Vittone's taste for *bizzarria* was largely formed by the exercises he undertook in copying Fischer von Erlach and Pozzo's designs for ephemeral decorations, scenographic caprices, and archeological fantasies. Such exercises equipped Vittone with a taste for the fanciful and a command of the principles of illusionistic design that ultimately led him to reinterpret and reinvent Guarini's *bizzarria* as part of a larger, comprehensive, and innovative synthesis.

It was at the Accademia di San Luca, in addition, that Vittone was exposed first hand to Borromini's architecture and to the Borrominian revival in Rome. It was also at the Accademia, in his competition project for the *Concorso Clementino*, that he designed his first Guarinian interlaced ribbed vaults, partly in response, it would seem, to the culture of the Borrominian revival that he was fast absorbing there.¹⁸⁷ The Guarinian revival that would

¹⁸⁶ For this conventional view, see M. PASSANTI, *Architettura in Piemonte da Emanuele Filiberto all'Unità d'Italia (1563-1870)* (Turin, 1945; rev. ed., Turin, 1990), p. 175; PORTOGHESI, "Metodo e poesia," p. 100; IDEM., *Bernardo Vittone*, p. 96; C. PEROGALLI, "Nota sull'architettura di Bernardo Vittone," in *Arte in Europa*, I, pp. 875-890, here p. 876; POMMER, *Eighteenth-Century*, p. 108; OECHSLIN, *Bildungsgut*, p. 146; HAGER, Review of *Bildungsgut*, p. 816; MILLON, "Vittone," in *Macmillan Encyclopedia*, p. 343; and SMITH, *Architectural Diplomacy*, p. 344, note 105.

¹⁸⁷ See MILLON, "Alcune osservazioni," pp. 148-151; and IDEM., "La formazione," pp. 454-455. See also POMMER, *Eighteenth-Century*, p. 108, who interprets Vittone's employment of Guarinian domes in his *Concorso Clementino* project as "a youthful gesture of local patriotism," and Vittone's art as being "in no small measure a nationalistic one." Vittone's interest in Guarini's architecture, it will be recalled, first manifested itself in his design for the Palazzo

later take place in Piedmont may in fact be understood as an extension of the Borrominian revival in Rome, with Vittone himself having served as the catalyst between the two.

Far from being an inconsequential period of his career then, Vittone's academic education equipped him with the critical and essential tools by which he subsequently came to master aspects of Guarini's art and synthesize them with aspects of Fontana and Juvarra's art, a synthesis that is the very hallmark of Vittone's architecture, especially his early architecture. Vittone's academic education in Rome was indispensable to his innovative rethinking of Guarini's architecture which itself, a century earlier, had borrowed much from the example of Borromini's architecture. Without that education it is unlikely that Vittone could have succeeded in reinterpreting Guarini's architecture in the brilliant and persuasive manner that he did.

Resumed Practice in Piedmont

The Guarinian Revival

In April 1733 Vittone returned to Turin accompanied by a letter of recommendation from Cardinal Alessandro Albani to the Marchese Ferrero d'Ormea, Savoyan minister of the Interior and representative to the papal court.¹⁸⁸ There he opened his studio and residence in the Palazzo d'Ormea where he remained until his death in 1770.¹⁸⁹ Yet Vittone was unable to secure

Municipale at Bra (1730-32) before he ever enrolled in the Accademia di San Luca.

¹⁸⁸ Rome, *Lettere Ministri*, Mazzo 184. Lettera 107. The letter, dated 17 April 1733, is cited in OLIVERO, *Le opere*, p. 27; and POMMER, *Eighteenth-Century*, p. 261, § J. See also MILLON, "La formazione," pp. 451-454; and A. BELLINI, *Benedetto Alfieri* (Milan, 1978), pp. 14-15.

¹⁸⁹ MARINI, *L'architettura barocca*, p. 154.

any royal commissions at this time. Instead, he appears to have briefly re-affiliated himself with Juvarra's workshop,¹⁹⁰ designing an entrance stairway for Juvarra's Villa Morra di Lavriano at Villastellone (1732-33)¹⁹¹ and a polychrome marble pavement in the presbytery of Santi Martiri in Turin (1734) to complement Juvarra's new marble altar that was being erected there at that same time.¹⁹² Vittone may also have had a hand in designing Juvarra's altar of San Giuseppe in Santa Teresa in Turin (1735) since he later published it as his own design in *Istruzioni diverse*.¹⁹³ The only independent commissions that Vittone received and discharged at this time were minor ones: an unexecuted project for the Chapel of Sant'Evasio in the Cathedral of Casale Monferrato (1735), the high altar for the Confraternity Church of Santa Croce at Caramagna (1736), temporary festival decorations in Turin commissioned on occasion of the royal wedding of King Carlo Emanuele III and Princess Elisabeth Theresa of Lorraine (1737), and two *apparati* for the *Quarant'ore* devotion, one executed and the other not, for Santi Martiri in Turin (1737).¹⁹⁴

¹⁹⁰ POMMER, *Eighteenth-Century*, p. 108.

¹⁹¹ On Vittone's stairway for the Villa Morra di Lavriano, see MOCCAGATTA, "La juvarriana Villa Morra," pp. 375-376, fig. 3; and CANAVESIO, "Inediti vittoniani," p. 181. According to, G. GRITELLA, *Juvarra: l'architettura*, 2 vols. (Modena, 1992), II, p. 357, the project at Villastellone is not sufficient evidence to confirm that Vittone worked in collaboration with Juvarra at this time.

¹⁹² The presbytery pavement of Santi Martiri has long been attributed to Juvarra, but Vittone's authorship is now confirmed on the basis of four drawings of the pavement in Vittone's hand and signed by him (Biblioteca dell'Archiginnasio, Bologna, Gabinetto disegni e stampe, *Raccolta disegni autori vari*, nos. 227-230); see CANAVESIO, "Inediti vittoniani," p. 172; and IDEM., *Piemonte Barocco*, p. 135. See also SIGNORELLI, "Per i Santi Martiri," p. 152. Vittone's presbytery pavement also was contemporary with a second marble altar that Juvarra designed for Santi Martiri (1733), this one for the New Sacristy.

¹⁹³ VITTORE, *Istruzioni diverse*, pl. 95 left figure. See also FAGIOLO, "L'universo," fig. 33. On Juvarra's altar of San Giuseppe, see CARBONERI, "Architettura," in *Mostra del Barocco*, I, pl. 120.

¹⁹⁴ POMMER, *Eighteenth-Century*, p. 109, suggests that Vittone received no work at this time

It was during this time also that Vittone was hired by the Theatines, who owned Guarini's papers, to help them prepare for publication a new comprehensive edition of Guarini's architectural treatise, *Architettura civile*. Guarini's treatise had been left incomplete at the time of his death in 1683. It was published three years later with the plates but without the text. For more than 50 years this edition remained the only one available. The circumstances surrounding the Theatines' selection of Vittone to prepare the new edition are unclear.¹⁹⁵ It has been suggested that, given his own interest in interlaced ribbed domes as shown in his *Concorso Clementino* project at the Accademia di San Luca, it may have been Vittone himself rather than the Theatines who initiated the project.¹⁹⁶ One suspects that Juvarra had a hand in the commission, perhaps in concert with his friend and colleague, Nicola Michetti, who was appointed to the office of salaried architect to the Theatine Order in 1733, just six months after Vittone had returned to Piedmont from Rome.¹⁹⁷ If, as suggested above, Vittone had met Michetti in Rome, then he would have been in an excellent position to benefit from Michetti's official ties to the Theatine Order.¹⁹⁸ In any event, soon after his return to Piedmont Vittone

due to the War of the Polish Succession (1733-39) which interrupted building activity in Piedmont for much of its duration. See also P. BIANCHI, "Lo Stato sabaudo e al guerra di successione polacca," in Ruggero, ed., *La forma del pensiero: Filippo Juvarra*, pp. 109-117.

¹⁹⁵ This was not the only commission that Vittone received from the Theatines. In 1739 he was again hired by the order to design the church of San Gaetano at Nice, a project for which Guarini himself previously had supplied an unexecuted design.

¹⁹⁶ POMMER, *Eighteenth-Century*, p. 109.

¹⁹⁷ John Pinto, Professor of Art History at Princeton University has informed me that Michetti served as architect to the Theatines at Sant'Andrea della Valle, and seems to have had a strictly business relationship with the order.

¹⁹⁸ See S. SITWELL, *Baroque and Rococo* (New York, 1967), p. 130, who suggests that Vittone was probably brought to the attention of the Theatines in Piedmont through their administration in Rome.

began editing Guarini's papers, and in 1737 *Architettura civile* was published in its entirety.¹⁹⁹ Work on Guarini's treatise deepened Vittone's understanding of, and appreciation for, the principles of Guarini's architecture.²⁰⁰ It also appears to have contributed to Vittone's Neo-Platonism which came to inform his own theory of architecture.²⁰¹

¹⁹⁹ G. GUARINI, *Architettura civile del padre D. Guarino Guarini Cherico regolare Opera postuma dedicata a Sua Sacra Reale Maestà* (Turin, 1737; reprint ed., Milan, 1968). The volume was approved for publication on 22 October 1735 by D. Nicolai Antinori, *Praepositus Generalis* of the Theatines in Rome. Vittone's involvement in editing Guarini's treatise for publication is recorded in the "Avviso a' Lettori" of the treatise in which we are told that Vittone "lent his hand" to the work of "cleaning up" Guarini's manuscript and "reuniting it into a single volume": "La qual Opera prevenuto dalla morte non avendo egli potuto mandare alla luce, ha lasciato a noi la fatica di ripulirla, e riunirla in un volume; nel che non poco ci ha sollevati il Signor Bernardo Vittone Architetto Accademico della insigne Accademia di S. Luca di Roma, quale dopo aver rapportato il primo premio d'Architettura nel Concorso dell'anno 1732 con sua gentile propensione vi ha prestata la mano." See MILLON, "Alcune osservazioni," p. 148, note 18; POMMER, *Eighteenth-Century*, p. 261, § 7; and N. CARBONERI, "Introduction," in Guarini, *Architettura civile* (ed., Milan, 1968), pp. XVIII-XIX. On Guarini's architectural treatise itself, see A. CAVALLARI MURAT, "Struttura e forma nel trattato architettonico del Guarini," in Viale, ed., *Guarino Guarini e l'internazionalità*, I, pp. 451-496; and E. FLYNN, "A Baroque Architectural Text: The *Architettura Civile* of Guarino Guarini," *Arris: Journal of the Southeast Chapter of the Society of Architectural Historians* I:1 (1989), pp. 18-28.

²⁰⁰ Still, the 1737 edition of Guarini's treatise contains errors, which indicate that Vittone may have failed to grasp the intricacies of Guarini's architectural thought. See W. MÜLLER, "The Authenticity of Guarini's Stereotomy in his *Architettura Civile*," *Journal of the Society of Architectural Historians* XXVII:3 (October 1968), pp. 202-208, who demonstrates that these errors are not present in Guarini's *Euclides adauctus et methodicus mathematicaque universalis* (Turin, 1671), the original work from which various parts of *Architettura civile* were taken, and that hence these errors must have been due to Vittone, who "was so little acquainted with the fundamentals of the traditional methods of stonecutting that he was unable to detect any erroneous exposition of stereotomic methods." See also IDEM., "Guarini e la stereotomia," in Viale, ed., *Guarino Guarini e l'internazionalità*, I, pp. 531-556; IDEM., "Vittone ed il modo stereotomico," in Viale, ed., *Bernardo Vittone e la disputa*, II, pp. 811-816; and CARBONERI, "Introduction," in Guarini, *Architettura civile*, p. XXI. However, since the Theatines themselves also contributed to the 1737 edition of *Architettura civile*, and since Vittone only "lent his hand" to the endeavor, it is uncertain to what degree that Vittone was responsible for having made the errors, although as editor he certainly was responsible for having detected and corrected any errors the monks would have made. In addition, there are errors and discontinuities in the numeration of the plates with respect to the original publication of 1686, errors due no doubt to the difficult task of "reuniting" the treatise "into a single volume."

²⁰¹ On the Neo-Platonic character of Vittone's architectural thought and its debt to Guarini, see J. HENDRIX, "Guarino Guarini and Bernardo Vittone," in idem., *Architectural Forms and Philosophical Structures* (New York, 2003), pp. 89-102, 244-247.

The publication of Guarini's treatise in 1737 helped to catalyze a full-blown Guarinian revival which took place in Piedmont at that time.²⁰² Earlier efforts by Sebastiano Guala (active 1640-72), Michelangelo Garove (1650-1713), Antonio Bertola (1647-1719), Francesco Gallo (1672-1750), Gian Giacomo Plantery (1680-1756), and other Piemontese architects to assimilate Guarini's architecture were sporadic and had met with only limited success.²⁰³ During the late 1730s, however, fresh from his work on Guarini's *Architettura civile*, Vittone designed a number of centrally planned churches with interlaced ribbed domes, including the Sanctuary of the Visitazione at Vallinotto (1738-39) and a project for Santa Chiara at Alessandria, that represent the first comprehensive rethinking of Guarini's architecture in Piedmont.²⁰⁴ These church designs, together with the contemporaneous appearance of Guarini's treatise, served to inaugurate the Guarinian revival in Piedmont.²⁰⁵ Numbers

²⁰² On the contribution of the 1737 edition of *Architettura civile* to the emergence of the Guarinian revival in Piedmont, see CARBONERI, "Introduction," in Guarini, *Architettura civile*, p. XIX. On the Guarinian revival itself, see M. ANDEREGG-TILLE, *Die Schule Guarinis* (Winterthur, 1962); CARBONERI, "Guarini ed il Piemonte," pp. 347-384; and A. CAVALLARI MURAT, "Chiesetta campestre di Guarino Guarini, antefatto di gusto strutturalista per esalti locali guarinismo e neoguarinismi," in *Tra Serra d'Isoara, Orco e Po* (Turin, 1976), pp. 246-261 [reprinted as "Costanzo Michele: architetto minore?" in *Come carena viva, scritti sparsi*, 5 vols. (Turin, 1982), I, pp. 501-506].

²⁰³ Even Juvarra, who grew up in the shadow of Guarini's buildings in Messina and worked in the shadow of Guarini's buildings in Piedmont, was not particularly successful in assimilating the eccentric character of Guarini's architecture in his own work. On the relation of Juvarra to Guarini; see A. GRISERI, "Oltre Guarini: Juvarra," in Viale, ed., *Guarino Guarini e l'internazionalità*, II, pp. 310-346.

²⁰⁴ On Vittone's Guarinesque architecture, see C. BARACCO, "Bernardo Vittone e l'architettura guariniana," *Torino* XVIII:2 (February 1938), pp. 22-27; MILLON, "Alcune osservazioni," pp. 144-153; ANDEREGG-TILLE, *Schule Guarinis*, pp. 46-48, 83-87, 95-96, 98-99, 102-105; CARBONERI, "Introduction," in Guarini, *Architettura civile*, p. XX; IDEM., "Guarini ed il Piemonte," pp. 347-383; CAVALLARI MURAT, "Aggiornamento," p. 499; IDEM., "L'avventura neoguariniana," pp. 482-498; and MEEK, *Guarino Guarini*, pp. 157-161.

²⁰⁵ Vittone's Guarinesque work also includes the unexecuted project for San Francesco at Nice, a variation on Guarini's unexecuted project for Santa Maria Ettinga in Prague; see ANDEREGG-TILLE, *Schule Guarinis*, pp. 46-48, 83-86; CARBONERI/VIALE, eds., *Bernardo Vittone architetto*, p. 32, no. 70, fig. 128; CARBONERI, "Guarini ed il Piemonte," p. 358, fig. 26;

of Neo-Guarinian churches soon began to crop up throughout the Piemontese countryside, including notably the idiosyncratic Santa Marta at Agliè (1739) by Costanzo Michela (1689-1754) and the equally idiosyncratic Chapel at Gerbido (perhaps also after a design by Michela).²⁰⁶ However, where Michela was interested primarily in Guarini's spatial dissonance and incongruities, Vittone was interested above all in the optical and illusionistic properties of Guarini's interlaced ribbed domes.²⁰⁷

PORTOGHESI, *Bernardo Vittone*, pp. 96-103, 145-146, fig. LVI; MEEK, *Guarino Guarini*, pp. 157-161, fig. 159; D. FOUSSARD and G. BARBIER, *Baroque: Niçois et Monégasque* (Paris, 1989), pp. 178-181; and C. de SAN ANTONIO GÓMEZ, "Concordancias geométricas, en los trazados de las plantas, de tres iglesias no construídas del Siglo XVIII," in M. Cigala and T. Fiorucci, eds., *Il disegno di progetto dalle origini al XVIII secolo* (Rome, 1997), pp. 397-399.

²⁰⁶ On Michela and Santa Marta at Agliè, see BRINCKMANN, *Theatrum Novum*, p. 17, nos. 1-5; ANDEREGG-TILLE, *Schule Guarinis*, pp. 80-83, 117; CARBONERI, "Architettura," in *Mostra del Barocco*, I, pp. 70-71, no. 198, pls. 170-a, 170-b; BRAYDA / COLI / SESIA, "Ingegneri," p. 121; MARINI, *L'architettura barocca*, p. 173; E. YOUNG, "Baroque Architecture in Piedmont," *Apollo* n.s. LXXVII:13 (March 1963), pp. 182-187, here pp. 186-187, fig. 7; C. CALANO, "S. Marta ad Agliè," *L'architettura, cronache e storia* XII:11 (March 1967), pp. 750-759; R. POMMER, "Costanzo Michela and Santa Marta in Agliè: A Guarinesque Rarity," *The Art Bulletin* L:2 (June 1968), pp. 169-182; IDEM., "A Note on Santa Marta," pp. 385-390; N. CARBONERI, "Il barocco piemontese," in Palumbo, ed., *Barocco europeo*, pp. 281-288, here p. 287, figs. 13-14; CAVALLARI MURAT, "Chiesetta campestre," pp. 246-261; C. PALMAS DEVOTI, "Il restauro di Santa Marta di Agliè: Un intervento per il recupero culturale del barocco minore in Piemonte," *Bollettino d'arte* LXIV (1979), pp. 87-106; M.D. POLLAK, "Michela, Costanzo," in Placzek, ed., *Macmillan Encyclopedia of Architects*, III, pp. 164-165; W. CANAVESIO, *Piemonte Barocco: Patrimonio Artistico Italiano* (Milan, 2001), pp. 271-273; and D. PROLA, *40 chiese barocche in Piemonte*, edited by C. De La Pierre (Turin, 2002), pp. 195-199. Michela also designed the Guarinesque church of San Giacomo at Rivarolo Canavese (after 1734); see CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 71, no. 196, pl. 169-a. On the Chapel at Gerbido, see ANDEREGG-TILLE, *Schule Guarinis*, pp. 77-80, 116, who attributes its design to Michela; and CARBONERI, "Guarini ed il Piemonte," pp. 359-360, figs. 33-34, who interprets the Chapel of Gerbido as a variant on Guarini's Immacolata Concezione.

²⁰⁷ See MARINI, *L'architettura barocca*, p. 155, who observes that Vittone remolded Guarini's architecture in a more scenographic and breezy articulation that was sometimes artificial and false, but also at times astonishing. See also C. NORBERG-SCHULZ, "Space in Architecture after Guarini," in *Architecture: Meaning and Place: Selected Essays* (New York, 1988), pp. 77-92, 249, here p. 83 [originally published as "Lo spazio nell'architettura post-guariniana," in Viale, ed., *Guarino Guarini e l'internazionalità*, II, pp. 411-437, here pp. 415-416], who concludes that Vittone demonstrated only passing interest in Guarini's complex spatial groupings generated by means of the principles of "pulsating juxtaposition" and "spatial interpenetration." Vittone's real interest, according to Norberg-Schulz, lay in Guarini's articulation of the structural skeleton and illumination of space. Michela, on the other hand, made intentional and original use of "pulsating juxtaposition."

Vittone's interest in the interlaced ribbed dome and, for that matter, all other aspects of Guarini's art, was keenest during the years of his early practice, the 1730s through the early 1740s. By the 1750s, however, he had lost much of his interest in them. Nevertheless, Vittone's contribution was consequential and decisive as minor architects such as Filippo Giovanni Battista Nicolis di Robilant (1723-83), Giuseppe Gerolamo Buniva († 1790), and Vittone's own assistant and collaborator, Mario Ludovico Quarini (1736-1800), among others, all of them directly inspired by Vittone's example, continued to design and erect Guarinesque churches with interlaced ribbed vaults well into the latter decades of the eighteenth century. Still, Vittone's Guarinesque architecture was unique. Alone among Guarini's followers in Piedmont, Vittone succeeded in incorporating and fully exploiting the optical and illusionistic qualities that so characterize Guarini's churches.

Even so Vittone was not beyond criticizing Guarini and his architectural writings. Vittone in fact hardly mentions Guarini in either one of his two treatises, citing him by name only eight times.²⁰⁸ This is due in part, it would seem, to Vittone's general aversion to citing modern (that is to say Baroque) Italian architects. Besides Guarini, the only Italian Baroque architects whom Vittone mentions by name in his treatises are Bernini,

²⁰⁸ VITTORE, *Istruzioni elementari*, p. 318: "Molte altre diverse maniere vi sono per formar la Voluta, alcune delle quali ne insegna D. Giovanni Caramuel Scrittore Spagnuolo, ed il P.D. Guarini."; p. 373: "...ha poi dato luogo alla censura dell' assai rinomato Architetto, e Matematico il P.D. Guarino [sic]."; p. 374: "...quattro sono le maniere, nelle quali trovo potersi essa regolare, due delle quali le spiega nel Trattato secondo della sua Architettura il P.D. Guarino [sic]."; p. 375: "Se tal' uno però ritrovasse difficoltà nel praticare questa operazione insegnata dal P. Guarini..."; p. 412: "...e de' più licenziosi, e meno della naturalezza amici moderni, quali si dimostrarono il Cavalier Borromino [sic], ed il Padre D. Guarino [sic]."; p. 498: "Lasciata ci ha la regola di proporzionare la grossezza de' muri alla grandezza degli Edificj il Padre Guarino [sic]."; IDEM., *Istruzioni diverse*, Preface, p. X: "...poichè in quanto a quelle, che lasciato ce n' ha il P. D. Guarino [sic]."; p. 27: "So che ha dato la regola di misurare la superficie d'un sì fatto corpo il Padre D. Guarino [sic]."

Cortona, Borromini, Fontana, and Juvarra, and none of them receives frequent or exhaustive mention. Bernini is cited just six times,²⁰⁹ Cortona twice,²¹⁰ Borromini four times,²¹¹ and Fontana five times.²¹² Even Juvarra, whom Vittone lauds as his master, is cited by name only five times.²¹³ By contrast, Vittone mentions Vitruvius by name some 90 times.²¹⁴ Likewise, he mentions

²⁰⁹ IDEM., *Istruzioni elementari*, p. 274: "...il Bernino [sic] all' Altare della Cattedra."; p. 303: "...ed il Cavaliere Bernino [sic], inseguendo tal lodevole esempio, introdasse nel Metope del primo Ordine della facciata del Palazzo Barberini le Api..."; p. 355: "Medesimamente il Cavaliere Bernino [sic] e molti altri, simil sorta d'ornamenti produssero in diverse guise composti, alludenti alle Persone, e Famiglie, per le quali innalzarono Fabbriche, tutti ai luoghi loro convenientemente adatti, de' quali troppo lungo farebbe, e troppo tedioso il rapporto. Soggiungerò solo, che lo stesso Bernino [sic] al Palazzo Barberini in Roma in vece delle Rose fece nel collo dei Capitelli Dorici scolpire delle Api, per essere queste lo stemma di quella famiglia..."; p. 363: "... state costruire sul modello fatto dal celebre Cavaliere Bernino [sic]..."; p. 412: "... quelle confrontando colle opere del Vignola, del Buonaroti, del Cavaliere Bernino [sic], di Carlo Fontana, e di tantri altri valenti Architetti..."; IDEM., *Istruzioni diverse*, p. 153: "...la magnifica famosa Scala del Palazzo Vaticano [...] Essendosi in questo caso il Cavaliere Bernino [sic]..."

²¹⁰ IDEM., *Istruzioni elementari*, p. 274: "...che gli dispose Pietro da Cortona all' Altare del Ciborio in S. Pietro..."; p. 390: "Pietro Berettino da Cortona nella facciata di Santa Martina in Roma ne ha ordinato i Pilastri in proporzione di 6:5."

²¹¹ IBID., p. 281: "Per la stessa ragione devesi pure avvertire di non disgiungerne per qualunque accidente le parte, che lo compongono, come fu le traccie del Cavaliere Borromini da taluno si pratica col farne separatamente ricorrere lo fascie attorno ad un vano, che nel di lui ricorso s'incontri."; p. 355: "...fra li quali il Cavaliere Borromino [sic] alla Chiesa nuova in Roma..."; p. 390: "Borromino [sic] alla facciata del Palazzo Barberini gli ha disposti in proporzione di 22:21:21."; p. 412: "...e de' più licenziosi, e meno della naturalezza amici moderni, quali si dimostrarono il Cavalier Borromino [sic]..."

²¹² IBID., p. 412: "... quelle confrontando colle opere del Vignola, del Buonaroti, del Cavaliere Bernino [sic], di Carlo Fontana, e di tantri altri valenti Architetti..."; p. 509: "Scrisse delle Cupole il Cavaliere Carlo Fontana nell' Istoria dello stesso Tempio Vaticano..."; p. 511: "Per dir fine ciò, che il medesimo Fontana ci fa osservare nel Tempio Vaticano in ordine al modo di formare le Cupole doppie (...) La maniera, che il Signor Fontana ci insegna per la formazione delle Cupole semplici, ha senza dubbio I suoi vantaggi..."; p. 514: "...lasciato l'intiere nelle misure dal Fontana fissate..."

²¹³ IBID., p. 285: "...mio Maestro l'Abbate Juvara [sic]."; p. 348: "...a cui rassomiglianza l'Abbate Tuvara [sic] nella facciata di Santa Cristina in Torino..."; p. 391: "...che l'Abbate Juvara [sic] dispose nella facciata del magnifico Palazzo di Madama Reale in Torino."; p. 455: "...e di Madama Reale..."; p. 528: "...Celebre Architetto di felice memoria l'Abbate Tuvara [sic]..."; p. 606: "...dell' Abbate Filippo Juvara [sic]..."; IDEM., *Istruzioni diverse*, p. 154: "...del celebre già più volte mentovato Architetto l'Abate Juvara [sic]."

²¹⁴ IDEM., *Istruzioni elementari*, p. 234: "...affermando Vitruvio [...] Secoli avanti Vitruvio..."; p. 235: "...Vitruvio per a Pizio la lode..."; p. 238: "...ne dica Vitruvio [...] queste con Vitruvio..."; p.

Italian Renaissance architects numerous times, citing Alberti some 34 times,²¹⁵ Serlio some 10 times,²¹⁶ Palladio some 34 times,²¹⁷ Scamozzi some 25 times,²¹⁸

252: "...Vitruvio fra gli posteriori Scrittori [...] Fa pertanto Vitruvio..."; p. 254: "...Vitruvio in più luoghi..."; p. 255: "...voglia con Vitruvio [...] Considerando con Vitruvio..."; p. 256: "...e questa da Vitruvio chiama..."; p. 258: "...è chiamato da Vitruvio [...] da Vitruvio detto..."; p. 260: "...Vitruvio chiama [...] di cui Vitruvio al..."; p. 261: "Secondo Vitruvio [...] chiamasi da Vitruvio..."; p. 267: "...per quanto ne dice Vitruvio..."; p. 273: "...assegnata gli viene da Vitruvio..."; p. 275: "Parlando Vitruvio [...] di questo passo di Vitruvio..."; p. 276: "...a mio parere Vitruvio d'adornare [...] che si è da Vitruvio accennata..."; p. 278: "Trattando Vitruvio..."; p. 280: "...che ne fa Vitruvio..."; p. 282: "...abbia solo Vitruvio quegli attribuito..."; p. 283: "...racconta Vitruvio [...] che ne dice Vitruvio..."; p. 285: "Parlando Vitruvio..."; p. 286: "...la discorra Vitruvio. [...] stesso Vitruvio doversi [...] che parlando Vitruvio qui..."; p. 287: "...Vitruvio inteso di parlar [...] poi siasi inteso Vitruvio [...] che Vitruvio assegna [...] che Vitruvio fa ..."; p. 290: "...ci ha Vitruvio lasciato..."; p. 299: "...e da Vitruvio nella..."; p. 300: "...e Vitruvio medesimo. [...] in Vitruvio non trovarono..."; p. 313: "...sono denominate da Vitruvio [...] da Vitruvio descritta..."; p. 316: "...che ricavò da Vitruvio..."; p. 320: "...che Vitruvio descrive [...] insegna Vitruvio doversi egli far..."; p. 321: "...in ciò con Vitruvio..."; p. 329: "Da Vitruvio vien questo rassomigliato [...] Asserisce Vitruvio [...] giusta il parere di Vitruvio..."; p. 330: "...lo stabilisce Vitruvio [...] da' sentimenti di Vitruvio... [...] di Vitruvio già avanti rapportato [...] seguire il parere di Vitruvio..."; p. 334: "Riferisce Vitruvio..."; p. 336: "...che Vitruvio assegna questo [...] benché Vitruvio gli voglia..."; p. 338: "...dalla regola di Vitruvio..."; p. 341: "...dopo i tempi di Vitruvio..."; p. 342: "...di questo da Vitruvio..."; p. 343: "...quattro Ordine di Vitruvio..."; p. 357: "Stendene Vitruvio..."; p. 364: "...detto da Vitruvio [...] insegna Vitruvio..."; p. 365: "...secondo riferisce Vitruvio..."; p. 366: "...senza base da Vitruvio denominati [...] è Precetto dello stesso Vitruvio [...] viene da Vitruvio rapportata..."; p. 378: "Prescrive Vitruvio..."; p. 388: "...ne apporta Vitruvio al [...] la Dottrina Vitruvio..."; p. 389: "...la regola di Vitruvio con fare [...] prescritta da Vitruvio..."; p. 396: "...ci lasciò scritti Vitruvio..."; p. 397: "...ebbe a pensare Vitruvio..."; p. 410: "...per fin Vitruvio istesso..."; p. 412: "...gli altri furono Vitruvio..."; p. 422: "...voluto insegnare Vitruvio..."; p. 448: "...del lib. primo Vitruvio..."; p. 457: "Precetto è di Vitruvio..."; p. 476: "...leggesi in Vitruvio..."; p. 480: "...più con Vitruvio..."; p. 483: "...che dicono Vitruvio..."; p. 484: "...scritto Vitruvio [...] che Vitruvio ne [...] che a Vitruvio..."; p. 496: "...apporta Vitruvio..."; IDEM., *Istruzioni diverse*; p. XIII: "...dir di Vitruvio sono..."; p. 86: "...dal Testo di Vitruvio [...] Lib. 1. di Vitruvio..."; p. 118: "...commenti sovra Vitruvio..."

²¹⁵ IDEM., *Istruzioni elementari*, p. 262: "...Alberti dà alle volute il nome..."; p. 369: "...come ha saggiamente osservato Leon Battista Alberti..."; p. 412: "...gli altri furono Vitruvio, Alberti..."; p. 476: "...ben disse Leon Battista Alberti..."; p. 479: "...e Leon Battista al..."; p. 480: "...a dir d'Alberti [...] sovra citati Alberti ..."; p. 481: "...al dir di Leon Battista quelle..."; p. 482: "...sovracitato Alberti..."; p. 483: "...secondo lo Scrittore suddetto [...] coll' Alberti stesso..."; p. 484: "...dar sede all' Alberti [...] citato lo stesso Alberti..."; p. 485: "...dallo Scrittore istesso [...] collo stesso Alberti..."; p. 487: "...l'avviso d'Alberti..."; p. 489: "Dice Leon Battista esser..."; p. 492: "...ben disse l' Alberti..."; p. 503: "...qual fu Leon Battista Alberti..."; IDEM., *Istruzioni diverse*, p. 102: "...specialmente Leon Battista Alberti..."; p. 103: "Trattando Alberti..."; p. 108: "...sono Alberti..."; p. 110: "ultimi fa Leon Battista menzione..."; p. 119: "...sovra menzionati Alberti..."; p. 121: "...prefato Leon Battista accennataci [...] Leon Battista prescrive [...] lo stesso Leon Battista fatto..."; p. 122: "...asseriscono Alberti..."; p. 123: "...eccettuato solo Leon Battista..."; p. 130: "...sovrammentovato Leon Battista Alberti..."; p. 134: "...mentovato Leon Battista Alberti..."; p. 138: "...rapportata da Leon Batista [sic] in fine [...] che Leon Batista [sic] in..."; p. 139: "...sovrammentovato Leon Battista..."

²¹⁶ IDEM., *Istruzioni elementari*, p. 254: "Serlio, e Vitruvio in più luoghi..."; p. 255: "...voglia con Vitruvio, e Serlio..."; p. 343: "Fu Serlio il primo..."; p. 379: "...abbia Serlio prescritto..."; p. 388:

Michelangelo some 15 times,²¹⁹ and Vignola some 79 times.²²⁰ Vittone even mentions Antonio Labacco, a minor architectural theorist of the sixteenth

"Seguita Serlio..."; p. 390: "...ce ne dà Serlio nel luogo sovracitato..."; p. 397: "Serlio sull'avviso..."; p. 398: "...delle quali con Serlio persuasi..."; p. 399: "...a cui l'ha Serlio applicata..."; p. 412: "...gli altri furono Vitruvio, Alberti, e Serlio..."

²¹⁷ IBID., p. 253: "Palladio, e Vincenzo Scamozzi il fanno..."; p. 282: "...per cui Palladio..."; p. 283: "...alcuni con Palladio di farlo..."; p. 290: "...che prefigge a questi Palladio [...] è Palladio di sentimento..."; p. 321: "Palladio pero..."; p. 334: "...per cui Palladio..."; p. 378: "Palladio esatto imitatore dell' antico..."; p. 386: "...del rinomato Andrea Palladio..."; p. 388: "...servito Andrea Palladio nel disegno..."; p. 389: "...pur anche fu da Palladio [...] Palladio in una Fabbrica considerabile..."; p. 450: "Commenda Palladio..."; p. 451: "Palladio, oltre questa [...] dello stessa Palladio..."; p. 455: "...pregettata da Palladio [...] ne divide Palladio..."; p. 463: "...pensiere è di Palladio..."; p. 480: "...a dir d'Alberti, e Palladio [...] sovra citati Alberti, e Palladio..."; p. 483: "...che dicono Vitruvio, e Palladio..."; p. 487: "...l'avviso d'Alberti, e Palladio..."; p. 491: "Ama Palladio che..."; p. 492: "...ne dice Palladio..."; p. 518: "...come dice Palladio..."; IDEM., *Istruzioni diverse*, p. 103: "Trattando Alberti, e Palladio [...] V'aggiunge Palladio aversi..."; p. 108: "...sono Alberti, e Palladio..."; p. 119: "...sovra menzionati Alberti, Palladio..."; p. 121: "...e da Palladio..."; p. 122: "...asseriscono Alberti, e Palladio..."; p. 139: "...riferiti da Palladio..."; p. 142: "...inserti ha Palladio [...] Palladio stesso parola."

²¹⁸ IDEM., *Istruzioni elementari*, p. 253: "...e Vincenzo Scamozzi il fanno..."; p. 282: "...per cui Palladio, Viola, e Scamozzi..."; p. 321: "...e Scamozzi s'accordano..."; p. 322: "fu poi perfezionata da Vincenzo Scamozzi..."; p. 323: "...di cui si è servito Vincenzo Scamozzi nel suo sistema..."; p. 342: "Solo fra gli Architetti Scamozzi considerandolo..."; p. 364: "Scamozzi le dona due..."; p. 378: "Vincenzo Scamozzi ne ha pure..."; p. 386: "...che Scamozzi prefigge..."; p. 389: "Scamozzi al Cap. II [...] ne abbia Scamozzi medesimo..."; p. 451: "...quanto prescrive Scamozzi..."; p. 455: "...e l'altra da Scamozzi..."; p. 459: "...i Precetti di Scamozzi..."; p. 461: "...con Scamozzi distinguere..."; p. 464: "...insegna Scamozzi..."; p. 491: "...Scamozzi alla grossezza..."; p. 494: "...l'avviso di Scamozzi..."; IDEM., *Istruzioni diverse*, p. 118: "...suggeri ce Vincenzo Scamozzi..."; p. 119: "...sovra menzionati Alberti, Palladio, e Scamozzi..."; p. 121: "...dice Scamozzi..."; p. 190: "Frattanto Scamozzi al..."; p. 191: "...quel fu Scamozzi [...] tale fundamenta Scamozzi assegna..."

²¹⁹ IDEM., *Istruzioni elementari*, p. 274: "Michel' Angelo nell Cappella della Pietà..."; p. 303: "...e perciò il Buonaroti avendo ..."; p. 309: "...e da Michel' Angelo Buonaroti nel Cortile del Palazzo Farnese..."; p. 321: "...e posto in opera dal celebre Buonarota..."; p. 322: "...Michel Angelo collocò..."; p. 328: "...Michel' Angelo ne adornò quasi in ogni parte..."; p. 329, note 4: "...rialzare sul disegno del Buonarota..."; p. 350: "...pure fra i Moderni il Buonarota..."; p. 355: "...il Buonarota, e Vignola adornarono..."; p. 384: "...fu da Michel' Angelo disposta..."; p. 390: "Michelangelo Buonaroti ha compartiti..."; p. 395: "...dal Bonaruoti [sic] nel [...] Bonaruoti [sic] collocato..."; p. 412: "...colle opere del Vignola, del Buonaroti..."; p. 509: "...e Michel' Angelo Bonarruoti [sic] quella..."

²²⁰ IBID., p. 233: "...e specialmente di Barozzo da Vignola..."; p. 253: "Ne divide Vignola [...] come Vignola..."; p. 254: "...di Barozzo da Vignola, per essere questo..."; p. 264: "...giusta il sistema da Barozzo da Vignola..."; p. 270: "...avendo Barozzo da Vignola fatto sciolta..."; p. 273: "Vignola, per stabilire in ciò una plausibile regola..."; p. 279: "...io ad imitazione di Vignola..."; p. 284: "...tale gliela assegna Vignola..."; p. 297: "...Vignola stabilisce..."; p. 298: "...che assegna Vignola..."; p. 300: "Vignola poi fu [...] che Vignola comprende in questo..."; p. 304: "Barozzo da Vignola la impiegò..."; p. 306: "...assegnate dal Vignola..."; p. 307: "...secondo le misure dal Vignola [...] il sistema del Vignola [...] con Vignola fissare [...] le misure dal Vignola proposte..."; p. 308: "...assegnatele da Vignola..."; p. 311: "...il sistema del Vignola..."; p.

century, some three times, almost the same number of times that he mentions Borromini.²²¹ (Vittone likewise names Giuseppe Viola Zanini, an equally minor theorist of the early seventeenth century, three times).²²² Such paucity of references to Italian Baroque architects is explained in some measure by the dearth, with the notable exception of Guarini's *Architettura civile*, of seventeenth and early eighteenth-century Italian theoretical tracts.²²³ Indeed, of the many Italian Renaissance architects whom Vittone cites in his writings,

314: "...le disposizioni da Vignola fissate [...] che vi assegna Vignola..."; p. 316: "...della cose insegnate da Vignola..."; p. 317: "...di Vignola lo stesso..."; p. 320: "Secondo il disegno di Vignola [...] che Vignola assegna..."; p. 322: "...disegnati dal Vignola [...] di Vignola, che nella..."; p. 323: "...dal Vignola loro assegnate..."; p. 326: "...più dilicata dal Vignola [...] per cui Vignola adatta..."; p. 331: "Vignola acconcia questo [...] ma per portarne Vignola..."; p. 332: "...che Vignola vi assegna [...] che Vignola assegna [...] come la stesso Vignola ha praticato..."; p. 333: "...così da Vignola..."; p. 334: "Ritrasse Vignola..."; p. 336: "Vignola seguita gli esempi..."; p. 338: "...che Vignola fissa..."; p. 339: "...convien dire aver Vignola con altri..."; p. 340: "...in cui Vignola, per dar..."; p. 343: "...da Vignola assegnate al..."; p. 345: "Essendo quest' Ordine dal Vignola..."; p. 347: "...da Vignola nell' altezza..."; p. 354: "Ne ha alcuni raccolto Vignola..."; p. 355: "...il Buonarota, e Vignola adornarono..."; p. 361: "...dal Sistema di Vignola..."; p. 362: "...ancorchè da Vignola proposta..."; p. 367: "...vien da Vignola diviso in parti..."; p. 380: "...vi si trova posto da Vignola..."; p. 382: "...fu da Vignola in più luoghi..."; p. 383: "Vignola in un progetto da lui..."; p. 389: "Vignola al Palazzo di Caprarola..."; p. 412: "...colle opere del Vignola..."; p. 417: "...quelle di Barozzo da Vignola. [...] alcune d'esse Vignola ordinò..."; p. 418: "...di Vignola osservate..."; p. 419: "...cangiare quelle di Vignola [...] che Vignola fa [...] che Vignola assegna..."; p. 420: "...che Vignola fa..."; p. 421: "...proporzioni da Vignola..."; p. 422: "...ha fatto Vignola..."; p. 424: "...ha disposto Vignola [...] le simmetrie da Vignola..."; p. 426: "...in cui Vignola..."; p. 429: "...le simmetrie di Vignola..."; p. 430: "...le simmetrie di Vignola ridotto..."; p. 431: "...le proporzioni di Vignola..."; p. 437: "...una Porta Toscana di Vignola [...] Altra Porta pur da Vignola..."; p. 438: "...pur di Vignola [...] parimente di Vignola [...] disegni di Vignola [...] trovato sendosi Vignola..."; p. 526: "...sendosene Vignola servito..."; IDEM., *Istruzioni diverse*, p. 152: "...commendato Barozzio [sic] Vignola."

²²¹ IDEM., *Istruzioni elementari*, p. 299: "...ed altri esempj da Labacco..."; p. 300: "...da Labacco riferito..."; p. 303: "Antonio Labacco al Portone ..."

²²² IBID., p. 282: "...per cui Palladio, Viola, e Scamozzi ne' Sistemi..."; p. 488: "...per quanto riferisce Viola al Cap. 17 del Lib. nell' anno 1608..."; p. 518: "...basterà secondo il Viola che..."

²²³ See H.-W. KRUFF, *A History of Architectural Theory: From Vitruvius to the Present*, Translated by R. Taylor, E. Callander and A. Wood (London and New York, 1994), p. 105, who writes: "The only seventeenth-century architectural theory after Scamozzi truly deserving of the name is the work of the Theatine father, Guarino Guarini..."; and p. 194: "Guarini's *Architettura civile* may be regarded as the most important Italian contribution to Baroque architectural theory, with a clear tendency to give priority to problems of geometry and stereotomy." The only other important treatise of the time, Pozzo's *Perspectiva pictorum* published at the end of the century, is, in Kruff's words, p. 194: "devoted exclusively to the perspectival depiction of architecture and therefore cannot count as architectural theory in the narrower sense."

all but five of them penned an architectural treatise.²²⁴ By contrast, none of the Italian Baroque architects whom he names, with the single exception of Guarini, were theorists. Moreover, Vittone's stated aim in writing his two treatises was to establish a set of academic norms by which young architects might be instructed, and for this he instinctively looked not to the unconventional designs of Baroque architects, but to the traditional and orthodox designs of Renaissance architects.²²⁵ Furthermore, Vittone took as the primary model for his own two treatises, Blondel's *Cours d'architecture* (1675-83), a work which itself is filled with numerous citations of Vitruvius, Alberti, Serlio, Palladio, Vignola, and Scamozzi but with hardly a mention of Italian Baroque architects.²²⁶ Vittone himself owned eight copies of Vitruvius's *De architectura*,²²⁷ a copy of Alberti's *De re aedificatoria* (1485),²²⁸ a

²²⁴ Vittone mentions Filippo Brunelleschi (*Istruzioni elementari*, p. 509), Donato Bramante (IBID., p. 309), and Bartolomeo Ammanati (IBID., p. 395), in addition to Labacco and Michelangelo, cited above, none of whom wrote a surviving treatise.

²²⁵ Vittone does not seem to have distinguished between Baroque and Renaissance architecture per se as the categories themselves had not yet been invented. Nevertheless, he did distinguish between the ancients (*antichi*), by whom he means Vitruvius, but also curiously, Alberti and Serlio (*Istruzioni elementari*, p. 412): "...giova osservare le Opere de' più antichi poco allo scherzo intenti Architetti, quali fra gli altri furono Vitruvio, Alberti, e Serlio...", and the moderns (*moderni*), by whom he means Michelangelo, Vignola, Borromini, Guarini, Bernini, and Carlo Fontana among others (IBID., p. 350): "...pure fra i Moderni il Buonarota..."; p. 355: "...ma i Moderni ancora si servirono nelle Opere loro di sì fatte composizioni, fra li quali il Cavalier Borromino [sic] ... Medesimamente il Cavalier Bernino ... e similmente il Buonarota, e Vignola..."; p. 412: "...moderni, quali si dimostrarono il Cavalier Borromino [sic], ed il Padre D. Guarino [sic], quelle confrontando colle opere del Vignola, del Buonaroti, del Cavalier Bernino [sic], di Carlo Fontana ..." Vittone also distinguishes between architecture that is characterized by simplicity (*semplicità*) and naturalness (*naturalezza*), on the one hand, and architecture that is characterized by licentiousness (*licenziosi*) and playfulness (*scherzo*), on the other. To the latter group belong the unconventional and unorthodox buildings of Borromini and Guarini, which Vittone considered to be modern architecture. See TAVASSI LA GRECA, "Considerazioni," p. 251.

²²⁶ On Vittone's reliance upon Blondel's treatise, see OECHSLIN, "Il soggiorno," p. 401.

²²⁷ M. VITRUVIUS POLLIO, *The Ten Books on Architecture*, Translated by M.H. Morgan (New York, 1960). On the listing of the eight copies of Vitruvius's treatise in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, pp. 249-250, nos. 516, 517, 534, 542, 571,

copy of Serlio's *Tutte l'opere* (1584),²²⁹ a copy of Pietro Cataneo's *L'Architettura* (1567),²³⁰ four copies of Palladio's *I quattro libri* (1570),²³¹ a copy of Martino Bassi's *Dispareri in materia d'architettura* (1572),²³² nine copies of Vignola's *Regola delli cinque ordini* (1582),²³³ a copy, perhaps two, of Scamozzi's *Dell'Idea* (1615),²³⁴ and a copy of Viola Zanini's *Della architettura* (1629).²³⁵ He also owned architectural writings by Italian Baroque architects and scenographers, including, as discussed above, Borromini's posthumous *Opus Architectonicum*

589, 630, 678. Vittone's copies of Vitruvius include various editions and translations with commentaries by Cesariano, Perrault, Rusconi, and Campbell.

²²⁸ L.B. ALBERTI, *On the Art of Building in Ten Books*, Translated by J. Rykwert, N. Leech and R. Tavernor (Cambridge, Mass., 1988). On the listing of Alberti's treatise in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 250, no. 674.

²²⁹ S. SERLIO, *Tutte l'opere d'architettura et prospettiva* (Venice, 1584; facs. 1619 ed., Ridgewood, 1964). On the listing of Serlio's treatise in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 249, no. 551.

²³⁰ P. CATANEO, *L'Architettura di Pietro Cataneo Senese, alla quale oltre all'essere stati dall'istesso autore rivisti, meglio ordinati e di diversi disegni, e discorsi arricchiti i primi quattro libri per l'adietro stampati, sono aggiunti di più il Quinto, Sesto, Settimo e Ottavo libro* (Venice, 1567). On the listing of Cataneo's treatise in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, pp. 250, no. 660.

²³¹ A. PALLADIO, *I quattro libri dell'architettura* (Venice, 1570). On the listing of the four copies of Palladio's treatise in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, pp. 249-250, nos. 519, 651, 663, 668.

²³² M. BASSI, *Dispareri in materia d'architettura, et prospettiva* (Bressa, 1572). On the listing of Bassi's book in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 249, no. 564.

²³³ G.B. da VIGNOLA, *Regola delli cinque ordini d'architettura di M. Iacomo Barozzi da Vignola* (Rome, 1582; facs. ed., Vignola, 1974). On the listing of the nine copies of Vignola's treatise in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, pp. 249-250, nos. 525, 526, 527, 529, 531, 532, 557, 558, 676.

²³⁴ V. SCAMOZZI, *Dell'Idea dell'architettura universale di Vincenzo Scamozzi divisa in X Libri* (Venice, 1615; facs. ed., Farnborough, 1964, 2v.). On the listing of Scamozzi's treatise in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 250, no. 672 and perhaps also no. 653.

²³⁵ G. VIOLA ZANINI, *Della architettura di Giuseppe Viola Zanini padovano pittore et architetto, libri due* (Padua, 1629). On the listing of Viola Zanini's treatise in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 249, no. 553.

(1720-25), Guarini's *Architettura civile* (1686, 1737), Pozzo's *Perspectiva pictorum* (1693-1700), Fontana's *Templum Vaticanum* (1690) and *L'Anfiteatro Flavio* (1725), De Rossi's *Studio d'architettura civile* (1702-21), Ferdinando Galli Bibiena's *Varie opere di prospettive* (1703-08) and *L'architettura civile* (1711), Giuseppe Galli Bibiena's *Architetture e prospettive* (1740), Fischer von Erlach's *Historischen Architektur* (1721),. He also owned two books on architectural ornament, Filippo Passarini's *Nuove inventioni d'ornamenti d'architettura* (1698)²³⁶ and Ferdinando Ruggieri's *Studio di architettura civile* (1722-28).²³⁷ There is also Alessandro Capra's treatise on surveying, *Nuova architettura dell'agrimensura* (1672), which Vittone cites in *Istruzioni diverse*, but of which there is no record in the inventory of his library.²³⁸ Still, none of these Baroque writings, as Hanno-Walter Kruft reminds us, constitutes, with the exception of Guarini's treatise, a true theory of architecture.²³⁹

Vittone's slight of Guarini may also have been due to his habit of neglecting to credit architects with the authorship of their designs. For example, Vittone publishes two of Carlo Fontana's designs in *Istruzioni diverse*, one for a catafalque and another for a country house, both of which he passes

²³⁶ F. PASSARINI, *Nuove inventioni d'ornamenti d'architettura ed'intagli diversi utili ad argentieri, intagliatori, ricamatori et altri professori delle buone arti del disegno* (Rome, 1698). On the listing of Passarini's book in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 250, no. 619.

²³⁷ F. RUGGIERI, *Studio di architettura civile: sopra gli ornamenti di porte e finestre colle misure, piante, modini, e profili tratte da alcune fabbriche insigne di Firenze erette col disegno de' più celebri architetti: opera*, 3 vols. (Florence, 1722-28). On the listing of Ruggieri's book in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 250, no. 610.

²³⁸ A. CAPRA, *Nuova architettura dell'agrimensura di terre et acqua di Alessandro Capra architetto cremonese* (Cremona, 1672). VITONE, *Istruzioni diverse*, p. 86: "...dell'Architettura di Baldassar [sic] Capra..."

²³⁹ KRUFFT, *A History of Architectural Theory*, pp. 105, 194.

off as his own designs without acknowledgment of Fontana's authorship.²⁴⁰ Likewise, he presents one of Juvarra's palace designs in *Istruzioni elementari* as his own invention again without mention of Juvarra. It is a project for a villa on a diagonal, cruciform scheme that he copied, with but few modifications, after one of Juvarra's palace projects for the Marchese Carron di San Tommaso at Pozzo Strada in Turin.²⁴¹ Vittone also illustrates two designs for altar furnishings in *Istruzioni diverse* (Figure 3.50) — one representing a sepulchre on Holy Thursday with a scene of the Scourged Christ, and the other a tabernacle displaying an image of a titular saint — that he copied after Juvarra's Altar of the Annunciation in the Superga (1728), but again without credit given to Juvarra.²⁴² In addition, as noted above, he presents Juvarra's altar of San Giuseppe in Santa Teresa in Turin as one of his own designs in *Istruzioni diverse*, again without mention of Juvarra. Vittone even passes off Benedetto Alfieri's Teatro Regio as his own design, illustrating it in *Istruzioni*

²⁴⁰ VITTONI, *Istruzioni diverse*, p. 162, pl. 32, and pp. 200-201, pl. 103 (right figure). Vittone's catafalque design is a direct copy after Fontana's design for a catafalque for King Pedro II of Portugal erected in Sant'Antonio dei Portoghesi in Rome (1707), and his country house design is a direct copy after Fontana's unexecuted project for a Villa in the Veneto (1689). On the other hand, in his discussion of St. Peter's dome in *Istruzioni elementari*, pp. 509-515, Vittone explicitly credits Fontana with having devised the method, as outlined in *Templum Vaticanum*, for determining the configuration of a dome. Vittone criticizes Fontana's method, however, both for single and double shell constructions, and supplies his own. See OLIVERO, *Le opere*, p. 61; and OECHSLIN, *Bildungsgut*, p. 130, note 69 on p. 182.

²⁴¹ VITTONI, *Istruzioni elementari*, pl. 87. See G. GRITELLA, "Quattro progetti di Juvarra per un palazzo in villa per il marchese Carron di San Tommaso a Torino," *Studi Piemontesi* XX:1 (March 1991), pp. 63-70, figs. 6, 9. On Vittone's diagonal and cruciform villa scheme, which is also recorded in two drawings of his unpublished "L'Architetto civile" in the Biblioteca Reale and in a third drawing conserved in the Museo Civico in Turin, see CARBONERI, "Appunti," pp. 60-62, figs. 2-5; and PORTOGHESI, *Bernardo Vittone*, p. 167.

²⁴² VITTONI, *Istruzioni diverse*, p. 195, pl. 94 (left and center figures): "La prima delle tre, che si contengono nella Tav. 94., servir potrebbe per rappresentare un Sepolcro il Giovedì Santo. La seconda è un Tabernacolo, che ben potrebbe venir in acconcio per esporre in venerazione sopra l'Altare principale la figura d'un Santo Tutelare." On Juvarra's Altar of the Annunciation, see DARDANELLO, "Altari piemontesi," pl. 57 (lower left figure). On the other hand, as suggested above, Vittone's silence regarding Juvarra's authorship may be an indication that it is he, not Juvarra, who was responsible for the design of the altar.

diverse as an example of a modern theater, but without mention made of Alfieri at all.²⁴³ Vittone even fails to give due credit to his own uncle, Gian Giacomo Plantery, neglecting to note Plantery's design for the church of Sant'Ignazio near Lanzo, for example, while praising his own design for the high altar.²⁴⁴ Something of this same begrudging attitude may have determined Vittone's response towards Guarini.

Vittone's slight of Guarini may also reflect a hardened attitude towards the Modenese architect himself. After all, Vittone published both *Istruzioni elementari* and *Istruzioni diverse* during the 1760s, late in his practice at a time when his enchantment with Guarini's architecture had long spent itself. Tavassi La Greca argues that Vittone deliberately put a distance between himself and Guarini in order to underscore the independence of his own architectural treatises from *Architettura civile*.²⁴⁵ Such distancing, in Tavassi La Greca's view, amounts to an implicit declaration of detachment regarding Vittone's own earlier role in the editing of *Architettura civile* for publication.²⁴⁶ She observes that the few instances in which Vittone does cite Guarini by name in his two treatises he does so with a rather critical and sometimes even contemptuous air. The single exception is his reference to Guarini as a

²⁴³ VITTORE, *Istruzioni diverse*, p. 213, pl. 110: "...la Tav. 110., ove a titolo d'esempio le piante rappresento unitamente al profilo del Regio Teatro fatto in Torino edificare dalla Reale Maestà di Carlo Emmanuele mio Sovrano, il Re di Sardegna..." See also CAVALLARI MURAT, "Aggiornamento," fig. 54.

²⁴⁴ Vittone also illustrates a stairwell from Plantery's Palazzo Saluzzo Paesana in Turin in *Istruzioni elementari*, p. 455, pl. 79, no. 7, but again without mentioning the building's architect by name. See CAVALLARI MURAT, "Gian Giacomo Plantery," p. 329, fig. 9 on p. 317.

²⁴⁵ TAVASSI LA GRECA, "Considerazioni," pp. 252-253. In her analysis Tavassi La Greca identifies the different premises and methods upon which Guarini and Vittone's treatises are based, distinguishing between Guarini's emphasis upon the abstract, the mathematical, and the theoretical, and Vittone's emphasis upon the practical, the concrete, and the empirical.

²⁴⁶ *IBID.*, p. 252.

“renowned architect and mathematician.”²⁴⁷ But even this, as Tavassi La Greca suggests, may have been more an indication of the objective condition of Guarini’s notoriety than of Vittone’s own personal regard for the architect.²⁴⁸ Otherwise, Vittone was critical of Guarini the theorist, having imputed to him inadequate knowledge and erroneous understanding. It is an imputation that Vittone pointedly levels against Guarini’s method for measuring the surface of vaults, striking thus at the very heart of Guarini’s expertise. Vittone judges Guarini’s method for measuring vault surfaces to be for the most part obscure and difficult and unintelligible to the simple workman.²⁴⁹ It is a method, Vittone asserts, that is even characterized by mistakes.²⁵⁰ In another passage, where he discusses various methods for forming the volute of the Ionic capital, Vittone compares Guarini’s method with that of Juan Caramuel de Lobkowitz (1607-82), only to conclude that the most beautiful and refined method is the one proposed by Nicholas Goldmann (1611-65).²⁵¹ It is Goldmann’s method for forming volutes then, not

²⁴⁷ VITTONI, *Istruzioni elementari*, p. 373: “...dell’ assai rinomato Architetto, e Matematico il P.D. Guarino [sic].”

²⁴⁸ TAVASSI LA GRECA, “Considerazioni,” p. 253.

²⁴⁹ VITTONI, *Istruzioni diverse*, Preface, p. X: “...che inservir debbono a misurare le superficie, per le quali non ci danno essi regola alcuna: poichè in quanto a quelle, che lasciato ce n’ ha il P.D. Guarino [sic], oltre all’ esser per lo più oscure, e difficili, e poco ad un semplice Misuratore intelligibili, al vero talora, per non so quale innavvertenza dell’ Autore stesso per altro sagace, non reggono.” See also TAVASSI LA GRECA, “Considerazioni,” p. 252, note 16.

²⁵⁰ VITTONI, *Istruzioni diverse*, p. 27: “So che ha dato la regola di misurare la superficie d’un sì fatto corpo il Padre D. Guarino [sic] alla proposizione 26. della parte seconda del suo Trattato della Misura delle Fabbriche; ma noto mi è altresì lo sbaglio occorrio in ordine a tale regola, non meno che ad altre ancora da esso proposte.” See also TAVASSI LA GRECA, “Considerazioni,” p. 252, note 18.

²⁵¹ VITTONI, *Istruzioni elementari*, p. 318: “Molte altre diverse maniere vi sono per formar la Voluta, alcune delle quali ne insegna D. Giovanni Caramuel Scrittore Spagnuolo, ed il P.D. Guarini. Fra le più belle, e compite però v’ha quella, che ci arreca il Signor Goldmann nel

Guarini's, that Vittone proceeds to summarize for the reader. In another passage Vittone mentions Guarini again in connection with Caramuel, in this case with respect to the manner for arranging a colonnade on an elliptical circumference.²⁵² Here, however, he sides with Guarini in censuring Caramuel's errors regarding the laws that govern the obliqueness of the orders.²⁵³ Vittone then proceeds to summarize Guarini's method, including the manner for determining the alignment of the capitals.²⁵⁴ Still, Vittone concludes that Guarini's method may prove, in the end, too difficult to put into practice and so he offers his own method as a simpler alternative.²⁵⁵ Vittone also recounts Guarini's method for proportioning the thickness of walls to the size of the building.²⁵⁶ Finally, in the passage where he advises

Tom. primo della sua Architettura..." See also TAVASSI LA GRECA, "Considerazioni," p. 252, note 18.

²⁵² VITTONI, *Istruzioni elementari*, pp. 372-373: "...onde non è maraviglia, che stasi abbagliato uno Scrittore Spagnuolo nella produzione d'un metodo, che improprietà ha poi dato luogo alla censura dell' assai rinomato Architetto, e Matematico il P.D. Guarino [sic]." See also TAVASSI LA GRECA, "Considerazioni," pp. 252-253, note 19.

²⁵³ Vittone cites Caramuel by name three times in *Istruzioni elementari*, p. 318: "Molte altre diverse maniere vi sono per formar la Voluta, alcune delle quali ne insegna D. Giovanni Caramuel Scrittore Spagnuolo..."; p. 365: "Fra gli Autori, che ci hanno data regola per far il Frontispizio, evvi il Caramuel Scrittore Spagnuolo..."; p. 372: "...onde non è maraviglia, che stasi abbagliato uno Scrittore Spagnuolo nella produzione d'un metodo..." Vittone also owned a copy of Caramuel's treatise, *Architectura civil, recta y obliqua considerada y dibuxada en el Templo de Jerusalem*, 3 vols. (Vigevano, 1678); see PORTOGHESI, *Bernardo Vittone*, p. 249, no. 540. On Caramuel and his conflict with Guarini, see W. OECHSLIN, "Osservazioni su Guarino Guarini e Juan Caramuel de Lobkowitz," in Viale, ed., *Guarino Guarini e l'internazionalità*, I, pp. 573-595.

²⁵⁴ VITTONI, *Istruzioni elementari*, p. 374: "Per quanto poi si è alla direzione delle linee Capitali, che hanno a servir di norma per descriver le linee laterali de' membri, quattro sono le maniere, nelle quali trovo potersi essa regolare, due delle quali le spiega nel Trattato secondo della sua Architettura il P.D. Guarino [sic], che qui primieramente si apportheranno, e susseguentemente le due rimanenti."

²⁵⁵ IBID., p. 375: "Se tal' uno però ritrovasse difficoltà nel praticare questa operazione insegnata dal P. Guarini, servire si potrà della seguente."

²⁵⁶ IBID., p. 498: "Lasciata ci ha la regola di proporzionare la grossezza de' muri alla grandezza degli Edificj il Padre Guarino [sic], insegnandoci doversi quelli fare nel piano

the young architect to combine simplicity and naturalness, on the one hand, with variety and playfulness, on the other,²⁵⁷ Vittone names Guarini as an example of the modern and unrestrained architect who is hostile to simplicity and naturalness.²⁵⁸

If, in his writings, Vittone makes infrequent mention of Guarini, he makes no mention whatsoever of Guarini's buildings, not even those buildings whose commissions originally had been awarded to Guarini, notably San Gaetano at Nice and the Sanctuary at Oropa, but which in the course of time were inherited by Vittone for which he produced his own designs.²⁵⁹ By contrast, Vittone makes it a point to discuss buildings by Bernini, Cortona, Borromini, Fontana, and Juvarra. These include Bernini's Baldacchino²⁶⁰ and Scala Regia in the Vatican,²⁶¹ Cortona's Santi Martina e

supremo fare nel piano supremo grossi la decima, o duodecima parte delle Camere..." See also TAVASSI LA GRECA, "Considerazioni," p. 252, note 18.

²⁵⁷ VITTONI, *Istruzioni elementari*, pp. 411-412: "...due esser (siccome da quanto di sovra si è detto deducesi) i punti principali, che conviene aver di mira nella produzione delle idee; acciocchè queste riescano tali, che atte siano a soddisfare il voluttuoso genio dell'occhio, che è il fine, per cui s'impiegano nelle Fabbriche gli ornamenti. E sono; primo la semplicità, e naturalezza dell' origine degli oggetti in ordine a quel che rappresentano; secondo la varietà, e lo scherzo delle loro figure."

²⁵⁸ IBID., p. 412: "...giova osservare le Opere de' più antichi poco allo scherzo intenti Architetti, quali fra gli altri furono Vitruvio, Alberti, e Serlio, e de' più licenziosi, e meno della naturalezza amici moderni, quali si dimostrarono il Cavalier Borromino [sic], ed il Padre D. Guarino [sic], quelle confrontando colle opere del Vignola, del Buonaroti, del Cavaliere Bernino [sic], di Carlo Fontana, e di tantri altri valenti Architetti..."

²⁵⁹ Vittone's designs for the church at Nice (which was built) and the one at Oropa (which was not built) were both entirely new schemes unrelated to Guarini's originals; see CARBONERI, "Introduction," in Guarini, *Architettura civile*, p. XX. On San Gaetano at Nice, see C. CESCHI, "Progetti del Guarini e del Vittone per la chiesa di S. Gaetano a Nizza," *Palladio* V:4 (1941), pp. 171-177; and FOUSSARD / BARBIER, *Baroque: Niçois*, pp. 53-57. On the church at the Oropa Sanctuary; see A. ROLANDO, "I disegni di Guarino Guarini, Francesco Gallo e Bernardo Antonio Vittone per la chiesa nuova del Santuario di Oropa," in M. Cigala and T. Fiorucci, eds., *Il disegno di progetto dalle origini al XVIII secolo* (Rome, 1997), pp. 392-396.

²⁶⁰ VITTONI, *Istruzioni elementari*, p. 363: "Le più famose [Salomonic columns], e riguardevoli per altro sono le quattro moderne, che reggono l'Altare di bronzo [Baldacchino] sopra li Depositi de' Principi degli Apostoli, state costruire sul modello fatto dal celebre Cavaliere Bernino [sic], col residuo, che l'ingiurie de' Barbari lasciorono, di que' bronzi, che la

Luca in Rome,²⁶² Borromini's Collegio di Propaganda Fide,²⁶³ the Chiesa Nuova (a symbolic column of which Vittone attributes to Borromini),²⁶⁴ and the Palazzo Barberini in Rome (the west façade of which, in its proportioning, Vittone attributes to Borromini, but in its ornament, to Bernini),²⁶⁵ Fontana's Santa Maria dei Miracoli in Piazza del Popolo in Rome,²⁶⁶ and Juvarra's Superga,²⁶⁷ Palazzo Madama,²⁶⁸ and Santa Cristina in Turin.²⁶⁹ And yet

magnificenza degli Antichi impiegati avea nel Tetto del Portico della Rotonda."

²⁶¹ IBID., p. 455, pl. 78, no. 15: "Nè sono già pochi di esse gli esempj, fra i quali avvi in Roma quello della Scala Regia in Vaticano..."; IDEM., *Istruzioni diverse*, p. 153, pl. 20: "...la magnifica famosa Scala del Palazzo Vaticano [...] Essendosi in questo caso il Cavaliere Bernino [sic], che ne fu l'Architetto, ritrovato nella soggezione di doverne accordare l'ingresso all' ampio Portico, che rigira attorno alla Piazza esistente al davanti della gran Basilica Vaticana..."

²⁶² IDEM., *Istruzioni elementari*, p. 390: "Pietro Berettino da Cortona nella facciata di Santa Martina in Roma ne ha ordinato i Pilastri in proporzione di 6:5."

²⁶³ IBID., p. 350: "Alcuni hanno soltanto il vaso scanalato, col Abaco, che lo ricopre, come nella facciata principale del Palazzo de Propaganda Fide..."

²⁶⁴ IBID., p. 355: "Non già poi solo gli Antichi, ma i Moderni ancora si servirono nelle Opere loro di sì fatte composizioni, fra li quali il Cavaliere Borromino [sic] alla Chiesa nuova in Roma un capitale foglie, e fiori di giglio, simbolo conveniente alla purità del Santo, a cui è dedicata detta Chiesa." See also B. TAVASSI LA GRECA, "«Decorazione» ed «Adattamento» nella poetica di Bernardo Vittone," in *Studi in onore di Giulio Carlo Argan*, Vol. III, *Il pensiero critico di Giulio Carlo Argan* (Scandicci, 1994), pp. 179-191, here p. 181, note 30 on p. 188.

²⁶⁵ VITTONI, *Istruzioni elementari*, p. 390: "Borromino [sic] alla facciata del Palazzo Barberini gli ha disposti in proporzione di 22:21:21."; p. 303: "...il Cavaliere Bernino [sic], inseguendo tal lodevole esempio, introdasse nel Metope del primo Ordine della facciata del Palazzo Barberini le Api, per essere queste la particolare divisa di quel Nobile Casato."; p. 355: "Soggiungerò solo, che lo stesso Bernino [sic] al Palazzo Barberini in Roma in vece delle Rose fece nel collo dei Capitelli Dorici scolpire delle Api, per essere queste lo stemma di quella famiglia..."; p. 455: "In tutte queste figure possono le Scale esser o semplici, o doppie, quali in molte, e varie degne Fabbriche osservare si possono, e specialmente, rispetto a quelle in primo luogo additate [...] a de' Barberini in Roma la prima, e seconda delle quali sono tonde, e l'altre ovale, ed esse ornate di Colonne..."; IDEM., *Istruzioni diverse*, pp. 152-153: "A somiglianza di questa formate veggonsi quelle de' celebri Palaggi di Sua Santità nel Quirinale, e de' Barberini in Roma, [...] Palaggi essi per la spettabile singolare loro magnificenza entrambi degni de' Personaggi..."

²⁶⁶ IDEM., *Istruzioni elementari*, p. 443: "E' questo pensiero concepito sovra la Pianta d'una Chiesa rotonda con quattro grandi Cappelle, e quattro altre minori fra le medesime diagonalmente disposte a foggia quasi di quella della Madonna de' miracoli in Piazza del Popolo."

²⁶⁷ IBID., p. 285: "...del Peristilio eretto avanti le Regia Chiesa di Superga [...] disegnate dal Celebre Architetto mio Maestro l'Abbate Juvara [sic]."

nowhere in either treatise does Vittone mention either one of Guarini's two celebrated churches in Turin — San Lorenzo and the Santissima Sindone — whose centralized plans and interlaced ribbed domes exerted such a decisive impact on his own work.

Regardless of his criticism of Guarini's architectural treatise, Vittone nevertheless was greatly influenced by the ideas articulated in it, just as he was by greatly influenced by Guarini's architecture itself (at least over the course of his early practice). Still, Vittone was highly selective in what he borrowed from Guarini. He cared little for the spatial dissonance and complexities of Guarini's architecture, nothing for the use of conic sections, and little for the daring structural acrobatics of Guarini's vaults in spite of his own training and skilled capacity as an engineer. Rather, Vittone was interested principally in the optical and illusionistic qualities of Guarini's architecture — open structure, superimposed shells, double layered walls, hidden light sources, perspectival foreshortening — that is to say, the qualities of Guarini's architecture that could be most readily assimilated to Juvarra's

²⁶⁸ IBID., p. 285: "...della facciata del Palazzo di Madama Reale in Torino ... disegnate dal Celebre Architetto mio Maestro l'Abbate Juvara [sic]."; p. 391: "...un forte Attico formato con Pilastrì bassi, e massicci, quali sono quelli, che l'Abbate Juvara [sic] dispose nella facciata del magnifico Palazzo di Madama Reale in Torino."; p. 455: "In tutte queste figure possono le Scale esser o semplici, o doppie, quali in molte, e varie degne Fabbriche osservare si possono, e specialmente, rispetto a quelle in primo luogo additate...e di Madama Reale...; IDEM., *Istruzioni diverse*, p. 154: "...la sontuosissima principal Scala dimostrasi del Palazzo del Castello in Torino, in oggi abitato dalla Reale Altezza il Signor Principe di Piemonte Ferdinando Maria di Savoia, già fatta ella fabbricare dalla felicissima memoria di Madama Reale Gioanna Battista della prefata invittissima Real Casa, col disegno, ed assistenza del celebre già più volte mentovato Architetto l'Abate Juvara [sic]."

²⁶⁹ IBID., p. 348: "...a cui rassomiglianza l'Abbate Tuvara [sic] nella facciata di Santa Cristina in Torino collocò il glorioso di S.A.R. Maria Gioanna Battista, che nel 1716 con questa vaga facciata fece un bellissimo compimento alla Magnifica Piazza di S. Carlo eretta dalla grande memoria di Carlo Emanuele II."

architecture.²⁷⁰ And so when Vittone adopted the formal language of Guarini's architecture he did so for a specific scenographic purpose.

Gain and Loss of Royal Patronage

Upon completing work on Guarini's *Architettura civile* Vittone resumed his architectural practice. By this time he stood poised for a potentially successful professional career as heir apparent to Juvarra in his capacity as royal architect to the King of Savoye. Juvarra himself had invested considerable effort grooming Vittone for just such a career, having taken Vittone into his own workshop, and then, most assuredly, having encouraged if not facilitated Vittone's entry into the Accademia di San Luca and later into Cardinal Albani's library. Juvarra obviously detected great promise in his protégé, for which reason he sought and gained for him powerful political support if not also royal patronage (e.g., the royal commission Vittone received in 1730 for the fence at the Palazzo Carignano). Thus when Juvarra died suddenly on 31 January 1736 Vittone was well positioned to assume the office of royal architect to the king. He had won first prize in the *Concorso Clementino* at the Accademia di San Luca and had been elected academician there; he had received the highest recommendations from Cardinal Albani; he had gained the political support of the Marchese Ferrero d'Ormea; he had received financial support from King Carlo Emanuele III himself to subsidize his studies at the Accademia; and finally he had secured from the Theatines,

²⁷⁰ The underlying compatibility of Guarini and Juvarra's architecture is noted by TAVASSI LA GRECA, *Bernardo Antonio Vittone*, p. 5, who writes: "...il Vittone abbia soprattutto inteso che le posizioni del Guarini e dello Juvarra, solo apparentemente in contrasto, costituiscano i due poli di una stessa tendenza..." See also POMMER, *Eighteenth-Century*, p. 111.

and faithfully discharged, the commission of editing Guarini's architectural papers for publication.

These achievements were duly noted and in the years immediately following Juvarra's death Vittone began to receive a number of royal commissions: the Collegio delle Provincie in Turin (begun 1737),²⁷¹ the Ospizio di Carità in Casale Monferrato (begun 1737),²⁷² and the Ricovero dei Catecumeni in Pinerolo (begun 1740).²⁷³ These buildings were some of the

²⁷¹ On the dating of the Collegio delle Provincie to 1737-38 instead of the traditional date of 1750, see POMMER, *Eighteenth-Century*, pp. 109, note 19 on pp. 122-123; MILLON, "La formazione," p. 446; L. FALCO, R. PLANTAMURA, and S. RANZATO, "Le istituzioni per l'istruzione in Torino dal XV al XVIII secolo: considerazioni urbanistiche e architettoniche (Il Collegio delle Provincie)," *Bollettino storico-bibliografico subalpino* LXXII (1974), pp. 259-303, here pp. 273-274; and W.B. STARGARD, "Repression and Catholic Reform: Bernardo Vittone's Commissions for Charitable Institutions," Ph.D. dissertation, Columbia University, New York, New York, 1995, p. 206. For a different view, see C. BRAYDA, "Documentazioni ed attribuzioni di edifici vittoniani," in Viale, ed., *Bernardo Vittone e la disputa*, II, pp. 205-244, here pp. 206-212, who proposes a date of 1748. On Vittone and the Collegio delle Provincie, see also F. ROSSO, *Il "Collegio delle Provincie" di Torino e la problematica architettonica ntonelliana negli anni Ottocentoquaranta* (Turin, 1975); G. BRUGNELLI BIRAGHI and L. DEL BOCCO, *Un palazzo vittoniano per l'arma dei carabinieri* (Turin, 1984), a source I was unable to consult; M. KIENE, "Die italienischen Universitätspaläste des 17. und 18. Jahrhunderts," *Römisches Jahrbuch der Bibliotheca Hertziana* XXV (1989): 329-380, another source I was unable to consult; and B. SIGNORELLI, "Bernardo Antonio Vittone e la costruzione del Collegio della Province," in Canavesio, ed., *Il voluttuoso genio*, pp. 199-217.

²⁷² OLIVERO, *Le opere*, p. 109, dates the Ospedale di Carità at Casale Monferrato to 1740, a date accepted by PORTOGHESI, *Bernardo Vittone*, p. 221. However, POMMER, *Eighteenth-Century*, p. 123, proposes a date of 1737 or a little later since documents of 1740 prove that construction was already well advanced by that date. This earlier date has been accepted by MILLON, "La formazione," pp. 445-446. On the Ospedale di Carità at Casale Monferrato, see also N. GABRIELLI, *L'arte a Casale Monferrato dal XI al XVIII secolo* (Casale Monferrato, 1981, 2nd ed.), p. 42, fig. 41; M. PASSANTI, "Ospedali del Sei e Settecento in Piemonte," *Atti e rassegna tecnica della Società degli Ingegneri e degli Architetti di Torino* n.s. V:4 (April 1951), pp. 121-125, here pp. 123-124; V. TORNIELLI, *Architetture di otto secoli del Monferrato* (Casale Monferrato, 1967), pls. LXXV-LXXVI; P. CHIERICI and L. PALMUCCI, "Gli ospizi di carità in Piemonte: appunti per un lettura del fenomeno insediativo," *Storia urbana* IV:12 (July-September 1980), pp. 27-57, here pp. 31, 34, 39, 50, note 20; P. CHIERICI, *Un edificio di pubblica utilità a Casale Monferrato: Il settecentesco 'Ospedale di Carità'* (Alessandria, 1985); and STARGARD, "Repression," pp. 89-118.

²⁷³ An inscription incised on a marble slab in the atrium of the Ricovero dei Catecumeni records the Savoyan royal coat of arms with the date of 1740; see OLIVERO, *Le opere*, pp. 108-109. On the Ricovero dei Catecumeni in Pinerolo, see also J. BERNARDI, *Ospizio de' Catecumeni in Pinerolo: Cenni storici* (Pinerolo, 1864); P. TOSEL, "Un edificio Vittoniano a Pinerolo. L'ex-ricovero dei Catecumeni," *Bollettino della Società Piemontese di Archeologia e Belle Arti* n.s. II (1948), pp. 203-205; PASSANTI, "Ospedali," pp. 124-125; PORTOGHESI, *Bernardo Vittone*, p. 220; CARBONERI/VIALE, eds., *Bernardo Vittone architetto*, p. 22, no. 29, figs. 35-37; V. PICONE,

largest commissioned by the Savoyan crown during the eighteenth century, and yet, as Pommer observes, they “were meant more as displays of royal charity than of royal grandeur.”²⁷⁴ Vittone also received other royal commissions. In 1736 he drew up two unexecuted projects for the royal palace in Turin that he subsequently published in *Istruzioni elementari*.²⁷⁵ Soon thereafter he began work on the Royal University in Turin, a commission he inherited from Juvarra and one that he would continue to prosecute for the duration of his practice.²⁷⁶ Vittone also designed temporary festival decorations for the king. In 1737 he was commissioned, along with various other Piedmontese architects, to design festival decorations for the city of Turin

“L’architettura barocca nel pinerolese: Vittone, Prunotto, Bunavia,” Thesis, Università degli Studi di Torino, 1968; B. SIGNORELLI, “Vittone a Pinerolo,” in Viale, ed., *Bernardo Vittone e la disputa*, II, pp. 245-281; CHIERICI/PALMUCCI, “Ospizi di carità,” pp. 31, 35-36, 40, 42, 51, 54; and V. COMOLI MANDRACCI, “Pinerolo: temi di storia della città,” *Atti e rassegna tecnica della società degli ingegneri e degli architetti in Torino* n.s. XXXVII (March 1983), pp. 109-157.

²⁷⁴ POMMER, *Eighteenth-Century*, p. 109. According to PORTOGHESI, *Bernardo Vittone*, p. 11, Vittone probably owed these commissions to the intervention of the Marchese d’Ormea. See also TAVASSI LA GRECA, “«Decorazione»,” pp. 185-186; and STARGARD, “Repression,” p. 95, who writes: “The fact that Vittone was paid by the crown suggests very strongly that he was hired by the monarch rather than by the Congregazione di Carità. Vittone lived in Turin and was certainly known to Carlo Emanuele III; Cardinal Albani introduced Vittone to the monarch in a letter marking the architect’s return from Rome in 1733. Furthermore, Vittone received assistance from Carlo Emanuele III’s secretary of internal affairs, Marchese Ferrero d’Ormea, at this time. Vittone’s relationship with this man was by no means casual, since he lived for a time in the d’Ormea family palace. It has been suggested that this high government official may have been instrumental in securing some of Vittone’s commissions. This seems very likely in the case of the Ospizio di Carità in Casale Monferrato when one considers that d’Ormea’s position made him a knowledgeable source concerning the structure of charitable assistance in the Savoyard state.”

²⁷⁵ VITTORE, *Istruzioni elementari*, p. 444, pls. 76-77. See OECHSLIN, “Il soggiorno,” p. 413, note 2, figs. 55-56, who traces the genesis of Vittone’s designs for the royal palace to Filippo Barigioni’s *Concorso Accademico* project of 1692. See also CARBONERI, “Appunti,” p. 67, figs. 19-20; PORTOGHESI, *Bernardo Vittone*, pp. 158-159; CARBONERI/VIALE, eds., *Bernardo Vittone architetto*, p. 18, no. 15, fig. 15; POMMER, *Eighteenth-Century*, p. 23; and CAVALLARI MURAT, “Aggiornamento,” p. 477, figs. 17-18.

²⁷⁶ See POMMER, *Eighteenth-Century*, p. 123; TAVASSI LA GRECA, “«Decorazione»,” p. 185, note 71 on pp. 190-181; and R. BINAGHI, “Un architetto al servizio della settecentesca ‘Reggia Università degli Studi’ di Torino. Bernardo Antonio Vittone ed il magistrato della Riforma,” *Bollettino della Società Piemontese di Archeologia e Belle Arti* n.s. LII (2000), pp. 147-180.

on the occasion of the royal wedding of King Carlo Emanuele III and Princess Elisabeth Theresa of Lorraine.²⁷⁷ Vittone also designed, apparently at this same time, a temporary fireworks machine intended for a coronation in Turin.²⁷⁸ This project, with its elaborate iconographical programme extolling the Royal House of Savoye, was obviously meant to flatter the king.²⁷⁹

In the end, however, it was not Vittone but Benedetto Alfieri (1699-1767) who succeeded Juvarra as royal architect — informally at first in 1738 as director of construction of the Teatro Regio, and then officially, on 10 June 1739, as first architect to the king.²⁸⁰ This appointment was largely due, it has been suggested, to the striking success of Alfieri's Palazzo Ghilini in Alessandria (1732) which had greatly impressed King Carlo Emanuele III during his stay there in 1736, and whose grandeur and *gravitas* clearly surpass that of any palace designed by Vittone.²⁸¹ In the words of Pommer: "It must have been clear that while none of Juvarra's other followers came up to his

²⁷⁷ Vittone's decorations for the royal wedding were restricted to the city sector reserved for the Jewish residential block or Ghetto, see L. KESSEL, *Festarchitektur in Turin zwischen 1713 und 1773. Repräsentationsformen in einem jungen Königtum* (Munich, 1995), pp. 152-170, fig. 32.

²⁷⁸ VITTORE, *Istruzioni diverse*, pp. 165-166, pl. 36. See FAGIOLO, "L'universo," pp. 135-136, fig. 10. The project is undated, but a date of the mid to late 1730s is suggested by its close resemblance to another one of Vittone's decorations, the *apparato* for the *Quarant'ore* devotion erected in 1737 for the Jesuits of Santi Martiri in Turin. A date of 1737 is advanced by KESSEL, *Festarchitektur*, p. 161, no. 36, fig. 36, who identifies Vittone's fireworks machine as forming part of the group of festival decorations erected in Turin for the royal wedding that year.

²⁷⁹ In designing his fireworks machine for the king, Vittone followed the example set by his uncle, Gian Giacomo Plantery, who earlier, in 1713, had designed a fireworks machine erected in Turin on the occasion of the ascension of King Vittorio Amedeo II to the throne of Sicily. On Plantery's fireworks machine, see CAVALLARI MURAT, "Gian Giacomo Plantery," pp. 314, 345, fig. 57 on p. 345; and KESSEL, *Festarchitektur*, pp. 211-216, nos. 66-67, figs. 66-67.

²⁸⁰ On Alfieri's Teatro Regio and its building history, see P. PORTOGHESI, *Storia del Teatro Regio di Torino: L'architettura dalle origini al 1936* (Turin, 1983), a source I was unable to consult.

²⁸¹ M. ROSCI, "Benedetto Alfieri e l'architettura del '700 in Piemonte," *Palladio* n.s. III:2-3 (April-September 1953), pp. 91-100, here p. 93. See also BAUDI DI VESME, *Schede Vesme*, I, pp. 12-13.

grand manner, Alfieri exceeded it.”²⁸² Perhaps, as Millon suggests, the king was displeased with Vittone’s personality or failed to appreciate Vittone’s mature manner.²⁸³ In addition, Vittone belonged to a *petit bourgeois* family whereas Alfieri belonged to an aristocratic one, a social distinction that must have commended the latter to the king.²⁸⁴ Alfieri also possessed expert administrative skills necessary for the royal post and which, by all accounts, eclipsed those of Vittone. In the words of Chiara Passanti:

The King preferred Alfieri over another possible candidate, Bernardo Antonio Vittone, whose style was then developing in a more personal, less official, and less representational manner. The choice of Alfieri suggests that Carlo Emanuele III valued, in a royal architect, qualities of governmental administrator besides the more specific ones of architect.²⁸⁵

²⁸² POMMER, *Eighteenth-Century*, p. 97.

²⁸³ MILLON, “Vittone,” *Architectural Review*, p. 98, describes Vittone as “an irritable, cantankerous tyrant.” This view that Vittone’s personality may have been too intemperate for the king’s liking is shared by PEROGALLI, “Nota sull’architettura,” p. 877.

²⁸⁴ POMMER, *Eighteenth-Century*, p. 109, writes: “Vittone thus lost out in royal favor to Alfieri, who had more liking for Roman architecture and better blood lines.” Alfieri was born in Rome into an aristocratic Piedmontese family from Asti while Vittone belonged to a *petit bourgeois* family from Turin. Alfieri was but one of many noblemen who practiced architecture in Piedmont during the sixteenth, seventeenth, eighteenth, and even nineteenth centuries. Others include Ercole Negro di Sanfront e Morra (1541-1622), Carlo di Castellamonte (ca. 1560-1641), Amedeo di Castellamonte (1610-83), Antonio Maurizio Valperga di San Marsanotto (active 1645-78), Carlo Giacinto Roero di Guarene (1675-1749), Giovanni Pietro Baroni di Tavigliano (known as Ignazio Agliaudo) (1705-69), Francesco Ottavio Magnocavallo di Varengo (1707-89), Paolo Antonio Massazza di Valdandona (1710-85), Ignazio Renato Camillo Birago di Borgaro (1721-83), Filippo Giovanni Battista Nicolis di Robilant (1723-83), Francesco Valeriano Dellala di Beinasco (1731-1803), and Ferdinando Bonsignore (1760-1843). On the involvement of the Piedmontese nobility in the practice of architecture, see BRICARELLI, “L’influenza di Roma,” p. 223; G.C. ARGAN, Review of *Theatrum Novum Pedemontii: Ideen, Entwürfe und Bauten von Guarini, Juvarra, Vittone wie anderen bedeutenden Architekten des piemontesischen Hochbarocks*, by A.E. Brinckmann, *Zeitschrift für Kunstgeschichte* I (1932), pp. 233-236 [reprinted in *Studi e noti del Bramante al Canova* (Rome, 1970), pp. 307-323]; IDEM., “Per una storia dell’architettura piemontese,” *L’arte* n.s. VI (September 1933), pp. 391-397; BRAYDA/COLI/SESIA, “Ingegneri,” pp. 82, 89-90, 91-92, 97-98, 103-104, 118-119, 120, 123-125, 134, 138; CARBONERI, “Architettura,” in *Mostra del Barocco*, I, pp. 24-26, 30-31, 66-67, 73-77, 85, nos. 5-9, 24-28, 183, 185-186, 208-223, 226-227, 251-253; and MILLON, “Native Origins,” pp. 676, 678.

²⁸⁵ C. PASSANTI, “Alfieri, Benedetto,” in Placzek, ed., *Macmillan Encyclopedia of Architects*, I,

Finally, Savoyan rulers consistently preferred to fill the office with foreign architects and Alfieri, a Roman by birth, was, like Guarini and Juvarra, but unlike Vittone, an imported commodity.²⁸⁶ For these or for whatever reasons, by 1740 Vittone no longer enjoyed the favor of either the monarchy or the nobility. Henceforth, he received no commissions from the court. For the remainder of his practice Vittone was restricted almost exclusively to designing churches and ecclesiastical annex buildings commissioned by parish priests, confraternities, and, on occasions, individual patrons from small towns and the countryside.²⁸⁷

Millon, upon later reflection, has taken exception to the notion that Vittone was denied the favor of the monarchy and the nobility for lack of talent or any other professional deficiency or misconduct.²⁸⁸ He revised his earlier view to suggest instead that Vittone never actively solicited royal favor in the first place, but voluntarily renounced an official career after having

pp. 65-67, here p. 66.

²⁸⁶ Alfieri followed a long line of foreign born architects — Meo del Caprino da Settignana, Pellegrino Pellegrini, Asconio Vittozzi, Guarino Guarini, and Filippo Juvarra — who practiced in Piedmont but who had received some training in Rome; see BRICARELLI, “L’influenza di Roma,” pp. 209-223. Still, Alfieri can hardly be considered a Roman architect, for while he was born and raised in Rome, his family was based in Asti and Alfieri himself returned to Piedmont at the age of 16 before having ever begun his architectural education and practice. According to MILLON, “Native Origins,” p. 675, Alfieri “was in no sense a Central Italian come north to work. He was, of course, a member of the nobility, and in the Piemontese tradition he turned to architecture after having been educated by the Jesuits in Rome and after having received a law degree in Turin.”

²⁸⁷ The only substantial commission that Vittone received after 1742 not for a parish or monastic church, was the Ospedale di Carità in Carignano (1744-49), commissioned by the same merchant, Antonio Facio, who earlier had commissioned Vittone to design the Visitazione at Vallinotto (1738-39). The bourgeois and provincial character of Vittone’s architecture is examined by G.C. ARGAN, “Bernardo Vittone,” *Il Messaggero* LXXXVI:21 (22 January 1964), p. 3 [reprinted in *L’architettura barocca in Italia* (Milan, 1963, 3rd ed.), pp. 64-65; *L’Europa delle Capitali, 1600-1700* (Geneva, 1964), p. 106; and *Studi e noti del Bramante al Canova* (Rome, 1970), pp. 347-351].

²⁸⁸ MILLON, “La formazione,” p. 456.

concluded that he had neither the capacity for, nor the interest in, the life of a court architect. By 1740, Millon argues, Vittone had come to realize that his true talent and capacity as an architect lay not in designing hospitals and large palaces, but in designing small centrally planned churches where his powers of imagination and innovation were best utilized.²⁸⁹ Granted, Vittone must certainly have recognized that his talent was best utilized in the design for small centrally planned churches, but it does not necessarily follow on this basis that he neglected to seek the office of royal architect.²⁹⁰ On the contrary, he most assuredly accepted royal commissions whenever he could get them. Moreover, his rather mean and stingy character, manifest in his abiding penchant for usury and litigation (activities that must have proved constant distractions to the progress of his architectural practice), suggests that he was

²⁸⁹ IBID., p. 456. The prosaic even inferior quality of Vittone's civic architecture is described by BRAYDA, "Opere inedite," p. 86: "...gli edifici civili dei Vittone non rappresentano la parte migliore della sua produzione artistica: Ospizi, collegi, scuole, palazzi privati sono di architettura semplice e corretta, hanno facciate rettilinee e la loro decorazione è sempre inferiore a quella che si riscontra nelle opere degli architetti suoi contemporanei." On centralized planning as a dominant theme in Vittone's church architecture, see C. NORBERG-SCHULZ, "Centrality and Extension in Bernardo Vittone's Sacred Works," in *Architecture: Meaning and Place: Selected Essays* (New York, 1988), pp. 93-104, 249 [originally published as "Centralità ed estensione nelle opere sacra di Bernardo Vittone," in Viale, ed., *Bernardo Vittone e la disputa*, II, pp. 9-27].

²⁹⁰ MILLON, "La formazione," p. 456, observes that during his early career Vittone consistently referred to himself as *architetto*, but that in 1742 he abandoned this title and henceforth signed his letters and drawings, *ingegnere*. Vittone's renunciation of the title of *architetto* for that of *ingegnere* suggests to Millon that the architect voluntarily and purposefully chose a more modest, but for him, a more satisfactory role. Still, Millon's distinction between the offices of *architetto* and *ingegnere* reflects a modern bias. It is a distinction that, in any case, was not firmly established in Piedmont during the seventeenth and much of the eighteenth centuries; see BRAYDA/COLI/SESIA, "Ingegneri," p. 73, who writes: "Per tutto il Seicento e buona parte del Settecento non si fece in Piemonte una netta distinzione fra Ingegnere e Architetti: negli atti ufficiali dello Stato sono talvolta trascritti in uno stesso documento due titoli diversi per la stessa persona..." Vittone himself apparently did not recognize any such distinction, at least to judge from his statement in *Istruzioni elementari*, p. 237: "...l'ufficio dell' Architetto, il quale perciò col nome d'Ingegniere viene volgarmente chiamato." In any case, Vittone refers to himself as *architetto*, not as *ingegnere*, in the title pages of his published treatises, *Istruzioni elementari* and *Istruzioni diverse*, and unpublished manuscript, "L'architetto civile," all dating to the 1760s during the last phase of his practice, at the time when presumably, according to Millon, Vittone had given up the title.

less than content with the meager fees accrued from the commissions he received for small confraternity and parish churches, commissions for which he had to continuously grub, and that he would have welcomed, if not the prestige and influence that came with the royal office, then assuredly at least the lucrative fees and stipends.²⁹¹ Still, having failed in the end to win the post of royal architect, Vittone appears to have given no thought of quitting Piedmont to pursue opportunities for royal patronage elsewhere in Europe. He was content instead to remain in his native land and follow the example of Plantery and Gallo in prosecuting a practice that was both provincial and modest in its professional scope.²⁹²

²⁹¹ Vittone was compensated relatively little for his confraternity and parish churches, roughly 1,000 lire each, usually paid out over an extended period of years. By contrast, Alfieri and Juvarra commanded annual salaries of 3,000 lire, supplemented by generous gifts from the king and additional commissions from both the church and the nobility; see POMMER, *Eighteenth-Century*, p. 110, note 25 on p. 124. Vittone's failure to secure the royal post contrasts sharply with the success of previous academicians of comparable ability and promise. Bernini, for example, had been called to France by the Bourbons to produce various designs. Fontana and several of his students — notably Fischer von Erlach and Michetti — had been patronized by the Habsburgs (Fontana and Fischer von Erlach by the Viennese branch of that house and Michetti by the Neapolitan branch). And Juvarra received royal commissions from the Spanish and French Bourbons in addition to those he received from the House of Savoye.

²⁹² Vittone's buildings, like those of Plantery and Gallo, are for the most part scattered throughout the rural regions of Piedmont.

CHAPTER TWO

"TO SATISFY THE VOLUPTUOUS GENIUS OF THE EYE": ILLUMINATION AND ILLUSION IN VITTONE'S THEORY AND PRACTICE OF ARCHITECTURE

Illumination

Vittone's Theory

Vittone's theory of architecture is notable for the emphasis it places on considerations of illumination and light, eyesight and vision, pleasant and agreeable views, feigned perspectives, ocular illusion, and in general luminous and optical effects. Indeed, Vittone's overriding ambition, stated time and again in his architectural writings, was to promote a manner of design that aims above all else to please, delight, and "satisfy the voluptuous genius of the eye."¹ Vittone applied this ambition to all aspects of a building

¹ VITTONI, *Istruzioni elementari*, p. 411: "...a soddisfare il voluttuoso genio dell'occhio..."; p. 235: "...che non senza grande soddisfazione sua costretto a trovarsi venne l'occhio Umano d'ammirarne la nuova maestosa comparsa."; p. 240: "...e gradevole all'occhio de' riguardanti."; p. 242: "...producano alla vista aggradevole, e soddisfacente."; p. 242: "Buona maestra delle proporzioni all'occhio aggradevoli..."; p. 244: "...posto stando esso occhio, nel luogo, da cui deve l'aspetto di detto oggetto esser goduto."; p. 252: "...il diletto ancora dell'occhio."; p. 262: "...col leggiadro, e grazioso suo aspetto l'occhio de' riguardanti..."; p. 267: "...colla grazia, e vistosità sua singolare appagamento, e diletto all'occhio de' riguardanti..."; p. 280: "...soddisfarne lo sguardo..."; p. 286: "...grata alla vista"; p. 292: "...che perciò non potrebbe rendersi all'occhio nella figura sua intieramente godibile."; p. 301: "...a' sensi soddisfazione, e diletto..."; p. 346: "...non dia all'occhio tutto quell'appagamento..."; p. 357: "...più bella vista..."; p. 357: "...prestare all'occhio dell'Uomo maggiore il compiacimento."; p. 364: "...più grande soddisfazione alla vista."; p. 367: "...eguale compiacimento, e diletto abbia voluto render paga la vista..."; p. 387: "...renderlo all'occhio aggradevole..."; p. 390: "...all'occhio la vista aggradevole..."; p. 386: "...l'occhio pago, e pienamente contento."; p. 409: "...render vaghe, ed all'occhio soddisfacenti..."; p. 410: "...compiacere il genio dell'occhio..."; p. 424: "...appagamento dell'occhio disporre"; p. 437: "...trova l'occhio di compiacimento, e diletto..."; p. 453: "...chi entra abbia campo a dilatare la vista per la varie..."; p. 509: "...si renda la vista loro aggradevole..."; p. 509: "...gustosa render la vista."; p. 514: "...non senza grande offesa dell'occhio..."; p. 514: "...compiacimento, che all'occhio prestano col bello..."; 525: "...tutto quel piecevole effetto, che suol l'occhio pretendere dalla buona simmetria degli

— its proportions, its ornaments, its members and constituent parts, its materials, and its structure.

According to Vittone, nothing reveals the architect's genius better than his ability to proportion his work in such a manner that the eye is left gratified and contented.² The architect needs only to compose and harmonize the parts among themselves in order to proportion a body well and render it pleasing to the eye.³ Vittone states that well proportioned objects give pleasure and delight to the eye in the same manner that harmonic tones produce delightful sounds that gratify and content the ear.⁴ In another passage he again equates the proportions that gratify and delight the eye with those that gratify and

oggetti..."; IDEM., *Istruzioni diverse*, p. 136: "...per renderlo più grazioso alla vista..."; p. 145: "...render si pretende leggiadro, e soddisfacente alla vista."; p. 146: "...rendono all'occhio, e singolare appagamento."; p. 147: "...godere della luce, e del prospetto."; p. 149: "...che più grato ne divenisse all'occhio l'aspetto..."; p. 155: "...un effetto assai piecevole all'occhio..."; p. 158: "...un comparto aggradevole all'occhio..."; p. 160: "...sia all'occhio d'appagamento..."; p. 173: "...godere l'aspetto..."; p. 178: "...disporre in degradazione prospettica ... nè senza appagamento nel suo aspetto delle Persone intelligenti, che la videro..."; p. 181: "...meglio esso lume si può, e più liberamente abasso diffondere, e meglio così rischiarire..."; p. 182: "...diffondendosi per esse il lume..."; p. 183: "...oltre la bramata luce..."; p. 184: "...compimento di luce..."; p. 185: "...godere per ogni parte della vista..."; p. 186: "...godere in tal modo coll' ajuto della luce..."; p. 188: "...varietà dello spazio, che all' occhio presenta ... riuscire ad esso di tutta sua e soddisfazione, e compiacimento."; p. 189: "...lascia all' occhio la libertà di potersi a suo piacere per essa distendere..."; p. 190: "...godere la vista de' spettacoli, ed oggetti, che di lontano rendonsi spettandi, ed a chi li mira aggradevoli..."; p. 198: "...la vista godere..."

² IDEM., *Istruzioni elementari*, p. 396: "Non v'ha cosa, in cui meglio si palesi l'ingegno dell' Architetto, che nel sapere proporzionare le sue Opere in modo, che tali dimostrandosi in apparenze, quali l'Arte, e Natura gli vogliono, *se ne trovi l'occhio pago, e pienamente contento* [*italics mine*]."

³ IBID., p. 387: "Se per proporzionar bene un Corpo, e renderlo all'occhio aggradevole [*italics mine*], altro non si richiedesse, che ben accordarne fra loro le membra, che lo compongono, pochi cred' io, sarebbero gli Architetti..."

⁴ IBID., p. 367: "...poichè se la Natura, che in tutte le cose fissa pare si tenga ad un metodo uniforme, ha voluto, che l'accozzamento di voci or alte, or basse da certe armoniche distanze tra di loro regolate producesse all' udito un dilettevole suono, che l'appaga, e contenta; dir anche si può con ragione, che di *eguale compiacimento, e diletto abbia voluto render paga la vista* [*italics mine*], allorchè ci si presentano oggetti, che da proporzioni eguali a quelle delle Musica regolati si trovino."

delight the ear, appealing to the theory of musical tones as an authoritative standard by which to establish the proportions that are pleasing to the eye.⁵

Light itself is governed by the same law of number and proportion as that which governs sound. This only stands to reason, Vittone explains, since it is natural for our senses to actively engage and take delight in proportions by means of the same measure of operations and motion of the spirit.⁶ Light is understood by Vittone to share still other properties with sound. It is comprised of atoms, that is to say luminous atoms, in the same way that sound is comprised of sonorous atoms.⁷ On the other hand, light is a fluid whose rays, like those of sound and all fluids, undergo operations of propagation, diffusion, reflection, refraction, and inflection.⁸ And so, in considering his Sanctuary of the Visitazione at Vallinotto, Vittone describes the reflections of light acting upon the triple-shelled dome of the church in terms almost identical to those he uses, in another passage, to describe the

⁵ IBID., p. 242: “Buona maestra delle proporzioni *all’ occhio aggradevoli* [italics mine] può esser la Theoria delle voci musicali, avendo la sperienza nelle occasioni fatto chiaramente conoscere ai valenti architetti più, o meno gustar negli oggetti l’occhio di quelle stesse proporzioni, delle quali più, o meno nelle voci si compiace l’orecchio...” Vittone supports his argument by appealing to the authority of two seventeenth-century French architects and theoreticians, François Blondel and René Oüvrard; IBID., p. 367: “Non mio; ma pensiero già fu del Signor Blondel appoggiato al sentimento del Signor Oüvrard [sic] il far paragone dell’ Architettura colla Musica: all’ esempio de’ quale motivo or prendo di quì spiegare il rapporto, che hanno le parti di questa Base colle voci d’un Tuono Musicale perfetto, che per più facile intelligenza esporrò in termini di Canto Fermo.” On the relation between architectural and musical systems of proportion in the Renaissance, see the discussion in R. WITTKOWER, *Architectural Principles in the Age of Humanism* (London, 1949; rev. ed., New York, 1971), pp. 101-154.

⁶ VITTONI, *Istruzioni elementari*, p. 242: “...e ben parmi, che anco ragione il detti; poichè naturale è a’ nostri sensi non operare, nè prendere diletto, che a misura delle operazioni, e del moto dello spirito...”

⁷ IDEM., *Istruzioni diverse*, p. 229: “Non v’ ha dubbio esser la grandezza degli atomi sonori, al pari quella degli atomi di luce [...] Cosa pertanto opportuna sia il vedere quale verisimilmente esser possa la figura degli sonori, e per maggior schiarimento della materia quella anche pure degli atomi della luce...”

⁸ IDEM., *Istruzioni elementari*, p. 244: “...proprietà essere naturale de’ raggi, come egli è di tutti i fluidi...” See also FAGIOLO, “L’universo,” p. 149.

reflections of sound acting upon the same dome.⁹ That is to say, the luminous and acoustical motions acting upon Vittone's church are both understood by the architect to be subject to one and the same mathematical operation.

Good proportions, according to Vittone, are attained by the operation of Congruence (*Congruenza*), defined by him as the natural attitude of things arranged so that each one is mutually connected to the other to produce an agreeable and satisfying view.¹⁰ Vittone reminds us that it was Vitruvius who first compiled the precepts necessary to form buildings with a well-regulated arrangement, and with as much regard for a building's capacity to delight the eye as for its usefulness.¹¹ Vittone also recounts Vitruvius's observation that when ancient architects set about to establish the proportions of the columns,

⁹ VITTORE, *Istruzioni diverse*, p. 186: "Dimostra nella Tav. 78. l'idea, secondo la quale, per secondare il divoto singolar genio del già sovra menzionato Signor Banchiere Antonio Faccio, ho formato il Disegno d'una Cappella campestre sotto il titolo della Visitazione di Maria Santissima... [...] Nel interno pero ella è ad un Piano solo, che formontato va da tre Volte l'una sovra l'altra esistenti, tutte traforate, ed aperte; così che luogo ha la vista di coloro, che si trovano in Chiesa, a spaziare per li vani, che esistono fra esse, e godere in tal modo coll' ajuto della luce, che vi s'intromette per mezzo di Finestre internamente non apparenti, la varietà delle Gerarchie, che gradatamente crescendo vi si rappresentano in esse Volte, e fino alla sommità del Cupolino, ove espressa vedesi la Santissima Triade." Compare to IBID., p. 246: "Quindi ne segue che tutti insieme udiransi più suoni riflessi al suono lor genitore rispondere, se eguale, o presso che eguale sarà la distanza de' corpi riflettenti dal luogo, in cui si è il suono stesso lor genitore prodotto, siccome appunto succede nella nobile Cappella fatta erigere dalla felice memoria del Sig. Banchiere Antonio Faccio, in onore di Maria Santissima visitata di S. Elisabetta, sulle fini della Città di Carignano, per la varietà de' concavi tutti fra loro distinti, ed unisimili, che forma danno alli volti tanto del vaso principale d' essa Cappella, che de' sfondati, che all' intorno vi si trovano regolarmente disposti." See also OLIVERO, *Le opere*, p. 74; W. CANAVESIO, "Presenze gesuitiche nella cultura di Bernardo Vittone e Giovanni Battista Galletto," in B. Signorelli and P. Uscello, eds., *La Compagnia di Gesù nella Provincia di Torino dagli anni di Emanuele Filiberto a quelli di Carlo Alberto* (Turin, 1998), pp. 269-285, here p. 279, note 65.

¹⁰ VITTORE, *Istruzioni elementari*, p. 242: "Congruenza è quella natural attitudine delle cose, la quale fa sì, che l'una coll' altra scambievolmente commesse, un *composto producano alla vista aggradevole, e soddisfacente* [italics mine]."

¹¹ IBID., p. 252: "...Vitruvio fra gli posteriori Scrittori fu il primo, che prese a compilarne i Precetti, la maniera insegnando di costituire con ben regolata disposizione le Fabbriche, e d'accoppiare all' utile, che elle prestano coll' uso loro alla vita dell' Uomo, il *diletto ancora dell' occhio* [italics mine]."

they were concerned not only to make the columns sufficiently firm and robust, but to give them grace and brilliance in order to gratify and delight the eye that beholds them.¹² And not just the proportions, but also the ornaments of the five orders were established by ancient architects in such a way that buildings are rendered charming and satisfying to the eye.¹³ Indeed, to satisfy the voluptuous genius of the eye is, for Vittone, the primary purpose for which ornament is applied to buildings.¹⁴ In particular, the ornament of the capitals of the architectural orders must be rendered graceful and satisfying to the sight,¹⁵ for it is by means of ornament that the decorum of a building is principally demonstrated.¹⁶

¹² IBID., p. 267: "Su questa fu, per quanto ne dice Vitruvio, che gli antichi Architetti, piuttosto che fu di qualunque altro esemplare, come di tutti il più nobile, ed il più eccellente, avendo a stabilire le proporzioni delle Colonne, sì che senza scostarsi dalla sodezza, e dalla robustezza, che la natura, e l'ufficio loro richieggono, prestassero tuttavia colla grazia, e vistosità sua singolare *appagamento, e diletto all'occhio de' riguardanti* [*italics mine*]..."

¹³ IBID., pp. 409-410: "Per quanto chiari sembrano, e certi nello stabilimento de' cinque suoi Ordini li Principj dell' Architettura, riguardo agli Ornamenti, ed al modo di *render vaghe, ed all'occhio soddisfacenti le Fabbriche* [*italics mine*], è cosa non dimeno innegabile, ed agli intelligenti assai nota, non poter essa in ciò vantare maggior certezza di quella, che può ad un' Arte conferire l'umano giudizio obbligato a seguire nella sua condotta le tracce della necessità, e del senso più tosto, che dell' infallibilità, e della ragione."

¹⁴ IBID., pp. 411-412: "...due esser (siccome da quanto di sopra si è detto deducesi) i punti principali, che conviene aver di mira nella produzione delle idee; acciocchè queste riescano tali, che atte siano a *soddisfare il voluttuoso genio dell'occhio* [*italics mine*], che è il fine, per cui s'impiegano nelle Fabbriche gli ornamenti. E sono; primo la semplicità, e naturalezza dell' origine degli oggetti in ordine a quel che rappresentano; secondo la varietà, e lo scherzo delle loro figure." See also CAVALLARI MURAT, "L'architettura sacra," p. 50; TAVASSI LA GRECA, "«Decorazione»,," p. 179.

¹⁵ VITTONE, *Istruzioni diverse*, p. 145: "...dalla cui considerazione ben può lo stustioso Leggitore comprendere non doversi nella composizione di tali Capitelli l'Architetto allontanare dalle buone, e legittime proporzioni loro convenienti giusta la qualità, o natura dell' Ordine, al quale appartengono, e doversi insieme procurare la morbidezza nell' unione, ed accozzamento delle cose, che per ornargli vi s'introducono, come cagione, ch' ella è, principale del buono affortimento d'un oggetto, che *render si pretende leggiadro, e soddisfacente alla vista* [*italics mine*]."

¹⁶ IBID., p. 416: "Se v'ha cosa, in cui il decoro, d' un' Edificio principalmente dimostrisi, essa certamente consiste negli ornamenti, ch' esternamente il distinguono, quali sono oltre gli

Vittone defines ornament, or more precisely decoration, as the application of accidents that the architect makes to a building in order to render it pleasing to the eye.¹⁷ And in another passage he tells us that decoration is employed for the purpose of arousing fantasy, within the bounds of reason, in such a manner that the eye finds gratification and delight.¹⁸ Vittone tells us, in addition, that the many and various members and constituent parts of the architectural order should be arranged and adapted to produce an elegant and graceful appearance that satisfies the eye that regards them.¹⁹ For example, the triglyphs and metopes of the Doric cornice should be distributed in a manner that gives satisfaction and delight to the eye.²⁰ Furthermore, the ornaments and proportions of the Composite capital must

Ordini, da cui ne vanno i diversi aspetti arricchiti, gli ornamenti delle Porte, Finestre, e Nicchie.”

¹⁷ IDEM., *Istruzioni elementari*, p. 240: “Decorazione altre non è, che quella applicazione, che l’Architetto fa all’ Edificio degli accidente, che render il possono fastoso, e gradevole all’ occhio de’ riguardanti [italics mine].” See also TAVASSI LA GRECA, “«Decorazione»,” p. 179.

¹⁸ VITTONI, *Istruzioni elementari*, pp. 436-437: “Esposti i principj, e spiegate le Regole concernenti la maniera di ben decorare gli Edificj, resta che si propongano alcuni esemplari, su i quali apponendosi coll’ intelletto loro, mediante attenta considerazione, a discorrere i nostri Leggitori, possano almeno in parte dall’ applicazione, che in essi trovasi delle suddette regole fatta agli stessi (reali siano, oppur fittizi) Edifizj, ravvisare non tanto già il modo, in cui si hanno quelle ad impiegare, e mettere in uso, quanto anche l’efietto, che le medesime di se nell’ occhio producono, per quindi eccitarsi nella fantasia, ed in essa fissamente stabilire le specie di quelle cose, nelle quali, senza scostarsi dalle leggi della ragione, maggiormente trova l’occhio di compiacimento, e diletto [italics mine]...” See also TAVASSI LA GRECA, “«Decorazione»,” p. 180.

¹⁹ VITTONI, *Istruzioni elementari*, p. 262: “Imperocchè egli è certo, che qualora non vengano essi con buon avviso, e con saviezza di giudizio, secondo richiede l’adattamento loro, insieme connessi, più tosto che un bel concerto da appagare col leggiadro, e grazioso suo aspetto l’occhio de’ riguardanti [italics mine]...”

²⁰ IBID., p. 301: “Nell’ esecuzione della presente Trabeazione è massima da osservarsi inviolabilmente di regolare in modo la distribuzione de’ Triglifi, e delle metope, che sovra il mezzo di ciascuna Colonna a trovarvisi venga un Triglifo, poichè rappresentando i Triglifi, come già si è detto, i capi delle Travi, che reggono il Coperto, è di dovere, che ad imitazione di queste si collochino essi in que’ siti, che maggiore possono in apparenza dimostrare la sodezza dell’ Edificio: oltrechè altrimenti operandosi, a peccar si verrebbe contro la ragione medesima, che in tutte le cose, che prestar devono a’ sensi soddisfazione, e diletto [italics mine], ordine, e regolarità indispensabilmente richiede.”

not appear to be too stocky and heavy or they will not give gratification to the eye.²¹ Flutes are applied in great numbers to the shaft of a column for the purpose of giving great pleasure to the eye.²² Likewise, the pediments that ornament doors, windows, and tabernacles serve as much to give a greater satisfaction to the sight as to provide a natural and complete termination to the building.²³ Vittone also tells us that superimposed columns should be given a diminution that corresponds to the natural pyramidal tapering of a great tree that renders a pleasing sight to the eye.²⁴ Likewise, balustrades should be designed in a manner that produces an entirely pleasing effect upon

²¹ IBID., p. 346: "Le volute però così grande, come le Ioniche, non troppo accordandosi per l'apparente pesantezza loro colla delicatezza delle proporzioni, e degli ornamenti propri della form principale di questo capitello, cagione sono, che comparendo egli a dispetto della natura di detti suoi ornamenti, e proporzioni alquanto tozzo, e pesante, *non dia all'occhio tutto quell'appagamento* [italics mine], che pare potersi ragionevolmente dalla vaghezza delle di lui membra pretendere."

²² IBID., p. 357: "E benchè sembrar possa a taluno, che il maggior numero delle scanalature sia per arrecare alle colonne, che hanno del delicato, più di vaghezza, nulla dimeno egli è certo aver la natura determinato quell' unico numero, in cui possono quelle di se, più che in qualunque altro, *prestare all'occhio dell' Uomo maggiore il compiacimento* [italics mine]."

²³ IBID., p. 364: "...se pur non è, che impiegati vengano per ornamento di Porte, Finestre, e Tabernacoli, perchè infatti non hanno questi in se quella naturalezza, e quella grazia, che quelli colla piramidale loro figura in se rappresentano, atta a prestare più naturale, e compito termine alla Fabbrica, e *più grande soddisfazione alla vista* [italics mine]."

²⁴ IBID., p. 390: "Ma perchè le cose, che riconoscon la Natura per Madre, hanno per l'ordinario i suoi estremi, ai quali è vizio fuor de' casi estremi l'accostarsi; perciò di dovere sarà nel degradar le colonne, che hanno a venir una sopra l'altra in diversi piani collocate, il non servirsi, che di quelle fra la sovr' addotte maniera, che sono a qualche sorta di maggior fondamento appoggiate, quale a preferenza d'ogni altra si è quella, di far il piede delle colonne superior eguale alla sommità delle rispettive loro prossimamente inferiori, stante la bella dolce, e naturale diminuzione, che loro ne avviene corrispondentemente a quella d'un grand' albero, che per la naturale sua piramidale decrescenza rende di se stesso molto *all'occhio la vista aggradevole* [italics mine]..." This principle, that the shaft of a column be equipped with a diminution that resembles the tapering of the trunk of a tree, was of such import to Vittone that he articulated it several times in his writings; IBID., p. 258: "Comunemente il fusto delle Colonne é diminuito nella sommità d'una sesta parte del loro diametro inferiore a rassomiglianza degli alberi, che salendo diminuiscono."; p. 278: "Devono inoltre le Colonne venir per ogni parte nell' ascesa loro insensibilmente diminuzione cominciare dal piede, ed andar successivamente fin alla cima proseguendo; benchè paja che tanto insegnar ci voglio la Natura colla piramidale decrescenza da essa praticata nella costituzione dello stipite degli Alberi..."

the eye.²⁵ The parapet and pedestals of a bridge also are to be sized, arranged, and positioned above the piers in such a manner that they are rendered gracious to the sight.²⁶ Furthermore, the figures and forms of modillions and other ornaments associated with the arches of profane buildings are to be assigned and determined, according to the free will of the architect, in a manner that produces grace and renders singular gratification to the eye.²⁷ Domes too must be pleasing to the sight. Vittone explains that they ordinarily are constructed of double shells in order that an agreeable view is presented not only on the inside but also on the outside.²⁸ For example, the dome of St. Peter's rises above the drum and covers the space below without giving great offence to the eye.²⁹ Moreover, the side aisle vaults surrounding the drum of

²⁵ IBID., p. 525: "...come si possano le medesime secondo gli esempj de' valenti Architetti effettuare: ma perchè giusta il modo ivi additato sembra che non vengano esse Balaustate a produrre, massimamente negli Ordini delicati, *tutto quel piecevole effetto, che suol l'occhio pretendere dalla buona simmetria degli oggetti* [italics mine]; perciò parso mi è conveniente di qui suggerire quelle regole..."

²⁶ IDEM., *Istruzioni diverse*, p. 136: "Ne' Ponti alcun poco considerabili stile v' ha di formarvi lateralmente di lungo in lungo per ambe le parte parti in su la sponda un muro di parapetto, alto ad appoggio d'Uomo, cioè oncie 25 circa. La di lui grossezza suole essere per lo meno d'oncie 10. Formasi egli talvolta tutto di lungo in lungo continuato a un stesso filo. In altri casi, *per renderlo più grazioso alla vista* [italics mine], si costituisce a risalti, disponendovi dei piedestalli, altri sovra le pile, ed altri a regolari intervalli fra essi, e ritirandone la parte, che resta loro tramezzo, alla quale si dà una minore grossezza."

²⁷ IBID., p. 146: "Sogliono per chiave, o serraglio degli Archi impiegare nelle Fabbriche Mensole, e Protiridi, e per sostegno di Cornici, ed altri consimili membri ed ornamenti collocar Termini, e Modiglioni; nè v' essendo in ciò maniera, o forma determinata, la qual convenga, come in molti altri ornamenti, inviolabilmente osservare, eccettuatane la massima, perlopiù corre di dar loro dall' una all' altra estremità della degradazione; resta ad arbitrio dell' Architetto l'assegnar loro quella figura, che meglio a lui pare. Perloche potendo là liberamente egli giuocare di fantasia, produrre si veggono talora dei parti, li quali per la grazia, onde accompagnata va la fantastica mostruosità loro, *di nobile rendono all'occhio, e singolare appagamento* [italics mine]."

²⁸ IDEM., *Istruzioni elementari*, p. 509: "Sono le Cupole una specie di Volte, che, per l'ordinario, doppio debbono, in ordine alla vaghezza della forma, produrre l'effetto; richiedendosi che *si renda la vista loro aggradevole* [italics mine] no solo al di dentro, ma ancora al di fuori; a differenza delle altre Volte, nelle quali soltanto al di dentro la grazia ricercasi."

St. Peter's are disposed in such a manner that gives great pleasure to the eye.³⁰ Still, it is no small difficulty, Vittone observes, to arrange the dome in such a way that the inside is endowed with grace and the outside is rendered pleasing to the sight.³¹

Materials, and in particular expensive and luxurious ones, should also be selected for their capacity to delight the eye. Vittone writes that marbles employed in buildings should be selected for their variety, pleasing quality, natural colors, and the grace of view, so that with great satisfaction the human eye comes to admire the new stately appearance of it.³² Likewise, a building's structure must be conceived and put together with an eye towards providing agreeable views. Vittone states that, with regard to the placement of beams upon columns, care must be taken as much to satisfy the eye's glance as to display grandeur and magnificence.³³ Finally, Vittone explains that while the origins of architecture were founded on the imitation of the simple form of a

²⁹ IBID., p. 514: "...ne seguirebbe che a segno tale si estendessero le parti superiori del Tamburo, che sorpassando il piano, da cui sorge la Cupola, si portassero a coprire in parte, *non senza grande offesa dell'occhio* [italics mine], il piede di essa."

³⁰ IBID., p. 514: "Il simile è delle Ale, che tal volta dispongonsi attorno al Tamburo; imperochè non v'ha dubbio, che oltre del maggior compiacimento, *che all'occhio prestano col bello* [italics mine]..."

³¹ IBID., p. 509: "Non poca è la difficoltà, che nella costituzione di questa specie di Volte s'incontra, attesa la disparità cha passa fra i termini, de' quali è di mestieri servisi per darle grazia al di dentro, e quelli, *che ne debbono al di fuori gustosa render la vista* [italics mine]."

³² IBID., p. 235: "Quindi penetrate le più recondite viscere de' Monti, quantità di Marmi n'estrassero, che nelle Fabbriche impiegando, tanto per le varie, e piecevole qualità, e colori loro naturali, e *per la grazia del prospetto* [italics mine], che l'Arte v'aggiunse, la vaghezza non meno, che la ricchezza ne accrebbero, che *non senza grande soddisfazione sua costretto a trovarsi venne l'occhio Umano* [italics mine] d'ammirarne la nuova maestosa comparsa."

³³ IBID., p. 280: "Se per coprire le case, affinchè dalle ingiurie de' tempi gli diffendessero, la necessità fu, che gli Uomini indusse ad impiegar sovra soda Colonne, o tronchi appoggiate rozze mensole, e travi, che le une su le altre reggendosi il peso delle tegole sostenessero, la civiltà, ed il lusso il motivo furono, per cui, non già tanto affine di *soddisfarne lo sguardo* [italics mine], quanto anche per ostentare grandezza, e magnificenza..."

poor and rough hut, the subsequent course of architecture has progressed by means of a fantastic human industry, which aims to please the genius of the eye in the consideration of new and various objects.³⁴

A building, especially a sacred one, must possess what Vittone calls *Leggiadria*, a term translated into English as elegance, gracefulness, or charm. According to Vittone, a building's elegance is derived primarily from its extrinsic decoration, not from its intrinsic organization. That is to say, Vittone locates elegance in the decorative, superficial, and accidental aspects of a building, and in so doing adheres to the Vitruvian notion that beauty is inextricably bound up in a building's appearance. Symmetry may be vitally important, for Vittone as well as for Vitruvius, but much more important is the appearance of symmetry that must be maintained at all costs, even to the detriment of the actual symmetry itself. Moreover, for Vittone, a building's elegant and graceful appearance is accomplished less by mathematical and logical calculation, however necessary such an operation may be for the general proportioning and arrangement of the building, than by the architect's intuition and studied sensibility. In other words, the architect's capacity to satisfy, please, and delight the eye is, in the end, less a matter of reason and science than one of talent and good taste.³⁵

³⁴ IBID., p. 410: "Imperocchè se si considera nella sua origine, a cui necessario è far soccorso nell' aversi a render ragione de' di lei più comuni elementi, altro fondamento non ritrovasi, che l'imitazione della semplice forma d'un povera, e rozza Capanna; se poi nel suo progresso, a cui riferibili sono per la maggiore parte i di lei Prodotti, altro appoggio non si rinviene, che il sentimento non mai appieno costante dell' Umana fantastica industria, che intenta a *compiacere il genio dell' occhio* [italics mine], sulla considerazione de' nuovi, e tutt' ora varj oggetti, che producendo venivansi, accorta resasi, colla produzione d'altri e più vistosi, e più regolari composti, tutt' ora però conformi a' detti elementi, lasciò in essi come in un specchio espresse quelle poche regole, che di norma poi servirono in ogni tempo agli Architetti per la produzione delle Opere loro anche più ragguardevoli."

³⁵ IBID., p. 437: "...per quindi eccitarsi nella fantasia, ed in essa fissamente stabilire le specie di quelle cose, nelle quali, senza scostarsi dalle leggi della ragione, *maggiormente trova l'occhio di*

It is in the second and third books of his first architectural treatise, *Istruzioni elementari*, that Vittone presents the general principles and categories regarding the orders, including notably those that concern light and eyesight. Vittone begins by defining architecture as the art concerned with the good construction of buildings and as consisting of two parts: Design and Construction.³⁶ Design is the conception and determination of all the members and their forms required for the construction of the building, while Construction is the actual employment and mixing together of materials to give the conceived building its actual existence.³⁷ Design is the work of the architect; Construction the work of the artisan.³⁸ A building is well constructed when everything corresponds completely to the ends for which it was produced.³⁹

Vittone defines three categories which are necessary for a building to be well formed: *Utilità*, *Sodezza*, and *Leggiadria*, with *Utilità* referring to the building's usefulness and convenience, *Sodezza* to its solidity, firmness, and

compiacimento, e diletto: onde ad acquistarsi il buono dallo sconcio, congiuntamente ad una totale inclinazione a non gustare, che di quelle composizioni, le quali in tutto spirano leggiadria, nobiltà e grandezza, che è ciò in cui consiste quella sì pregiata prerogativa volgarmente detta il Buon gusto." See also TAVASSI LA GRECA, "«Decorazione»," p. 180.

³⁶ VITTONI, *Istruzioni elementari*, p. 237: "L'Architettura è un' Arte, la quale tratta della maniera di ben costruire le Fabbriche. Due sono le di lei parti, cioè Disegno, e Costruzione."

³⁷ IBID., p. 237: "Consiste il Disegno nell' ideare, e determinare in tutte le sue membra la forma, che pretendesi dare alla Fabbrica nel costruirla. La costruzione è attual' impiego, ed accozzamento, che si fa de' materiali, per dar all' ideata Fabbrica la reale esistenza."

³⁸ IBID., p. 237: "Nella costruzione oltre agli Architetti v' hanno parte tutti quelli Artefici ancora, il cui officio riguarda in qualche modo l'Arte del Fabbricare: Anzi ad essi, esclusone il metodo, ed il tracciamento, tutta s'appoggia la Costruzione. E' il Disegno opera tutta d'ingegno, ed a questo propriamente riguarda l'officio dell' Architetto, il quale perciò col nome d'Ingegniere viene volgarmente chiamato."

³⁹ IBID., p. 237: "Una Fabbrica si può dir ben costrutta, allorchè tutte in se ritiene le qualità, che render le possono commendabile, e tale allora ella è, quando ritrovasi intieramente corrispondente al fine, pel quale viene prodotta."

durability, and *Leggiadria* to its elegance, gracefulness, and charm.⁴⁰ Vittone's categories correspond precisely to the Vitruvian triad of *Utilitas*, *Firmitas*, and *Venustas*, or, as Sir Henry Wotton translates them into English, *Commodity*, *Firmness*, and *Delight*.⁴¹ The building will be useful and convenient, Vittone tells us, if it freely and commodiously serves the use for which it was specifically intended.⁴² It will be solid and stable if the materials are of good quality and connected together well, if the form is legitimately and suitably arranged, and if the foundation is both sufficiently sized and firmly and securely positioned.⁴³ Finally, the building will be elegant, charming, and graceful if its members are reconciled and proportioned in a manner that entirely satisfies both the eye and the judgment that regard them.⁴⁴ Not only the faculty of eyesight, then, but also that of judgment and reason must be brought to bear in the making of beautiful architectural compositions.⁴⁵

⁴⁰ IBID., p. 237: "Tre, sono le qualità principali, che necessariamente richieggonsi in una Fabbrica per essere ben costituita, e questo sono utilità, la sodezza, e la leggiadria."

⁴¹ The Vitruvian character expressed in Vittone's architectural treatises is discussed by KRUFF, *History*, pp. 195-196.

⁴² VITONE, *Istruzioni elementari*, p. 238: "Sarà utile la Fabbrica, se liberamente, e comodamente all' uso ella servirà, a cui resta specialmente destinata."

⁴³ IBID., p. 238: "Sarà stabile, o soda, se di buona qualità, e ben insieme connessa sarà la materia, che la compone, se legittima-, e confacente ne sarà la forma, la grandezza, e la positura, e se fermo finalmente, e sicuro sarà il fondamento, su cui ella insiste."

⁴⁴ IBID., p. 238: "Leggiadra poi sarà la Fabbrica, se in maniera tale fra di loro accordate, e proporzionate le di lei membra saranno, *che l'occhio non solamente, ma il giudizio ancora de' riguardanti ne resti intieramente appagato* [*italics mine*]."

⁴⁵ IBID., p. 412: "Perchè in oltre poi sono le composizioni d'Architettura suscettibili di freddezza, e vivacità, di regolarità, e disordine, così fa di mestieri d'un talento, che non riposando su ogni apparente bellezza, sappia rendersi avvezzo a nulla ammettere per buono se non se esaminato al peso della Critica, e della ragione." See also TAVASSI LA GRECA, *Bernardo Antonio Vittone*; p. 12.

Vittone proceeds to tell us that the operation of Design is divided into two parts: Organization and Decoration.⁴⁶ Organization concerns the determination of the idea of the building with regard to the number, type, form, size, order, place, and position of its members, all of which must converge to form the building with respect to its intended use.⁴⁷ Decoration concerns the application of accidents that the architect makes to the building in order to render it splendid and pleasant to the eye that beholds it.⁴⁸ It is by means of its Organization that the building is rendered commodious and firm, and it is by means of its Decoration that it is rendered elegant and beautiful.⁴⁹ That is to say, Organization concerns the operation of Design pertaining to the building's Usefulness (*Utilità*) and Solidity (*Sodezza*), whereas Decoration concerns the operation of Design pertaining to its Elegance (*Leggiadria*).⁵⁰ In another passage, Vittone distinguishes between the extrinsic and intrinsic forms of a building, with the extrinsic form pertaining to a building's Decoration in which consists Elegance, and the intrinsic form pertaining to a building's Usefulness and Solidity.⁵¹ In other words, beauty is to be found in

⁴⁶ VITTONI, *Istruzioni elementari*, p. 240: "Del Disegno, in quanto egli richiede essenzialmente l'opera dell' Architetto, due sono le parti, Organizzazione, e decorazione."

⁴⁷ IBID., p. 240: "Per Organizzazione altro non intendo, se non se l'assoluta determinazione dell' idea dell' edificio, per quanto riguarda il numero, la specie, la forma, la grandezza, l'ordine, il luogo, e la positura di tutte le membri, che concorrer devono a formare esso Edificio, rispetto all' uso però, a cui resta egli destinata."

⁴⁸ IBID., p. 240: "Decorazione altro non è, che quella applicazione, che l'Architetto fa all' Edificio degli accidenti, che render il possono fastoso, e gradevole all' occhio de' riguardanti [italics mine]."

⁴⁹ IBID., p. 240: "Ha per oggetto l'Organizzazione il render l'Edificio comodo, e permanente; la decorazione il renderlo leggiadro."

⁵⁰ IBID., p. 241: "Sendo la leggiadria, come già si è detto, l'oggetto essenziale della decorazione..."

the building's external appearance, its Decoration, and not in its inherent substance, its Organization.⁵² And it is here, in the application of Decoration — the operation of Design concerned primarily with a building's appearance and superficial aspects — that considerations of light and sight and the arrangement of agreeable and gratifying views are addressed within Vittone's theory.

Vittone defines Elegance (*Leggiadria*) as a well ordered connection of various and corresponding things adapted to the nature of the eye and judgment.⁵³ Vittone explains that Elegance depends on four things: Variety (*Varietà*), Congruence (*Congruenza*), Order (*Ordine*), and Adaptation (*Adattamento*).⁵⁴ Two of these four, Congruence and Adaptation, are explicitly concerned with the operations of eyesight and light. Congruence is that natural attitude of things arranged so that each is mutually connected with the other in such a manner that an agreeable and satisfying view is produced.⁵⁵ It involves the formation of pleasing proportions, achieved by the architect

⁵¹ IBID., p. 445: "Veduto quanto riguarda la forma estrinseca, val a dire la decorazione degli Edifici, in cui consiste la leggiadria, che è una delle tre essenziali prerogative dalla perfezione loro volute; resta che si dia qualche cognizione sovra quelle cose, che a produrre inservono la buona disposizione della forma loro intrinseca, che è quella, la qual concerne l'uso, e la sussistenza de' stessi Edifici, come oggetto, che sono, di quanto riguarda le due rimanenti loro prerogative, val a dire il comodo e la Fermezza giusta quel, che si è da principio accennato."

⁵² On the relation of *Leggiadria* to extrinsic ornament in Vittone's theory, see the discussion in CAVALLARI MURAT, "Aggiornamento," pp. 497-498.

⁵³ VITTONI, *Istruzioni elementari*, p. 241: "La leggiadria dunque altro non è, che una ben ordinata connessione di varie cose fra di loro corrispondenti, adattata alla natura dell'occhio, e del giudizio."

⁵⁴ IBID., p. 241: "Dipende ella, come dinota la stessa definizione, da quattro cose, che sono Varietà, Congruenza, Ordine, e Adattamento."

⁵⁵ IBID., p. 242: "Congruenza è quella natural attitudine delle cose, la quale fa sì, che l'una coll'altra scambievolmente commesse, un composto producano alla vista aggradevole, e soddisfacente."

through his most diligent observance of good taste.⁵⁶ Adaptation concerns the extrinsic accidents dependent upon sight. It is the choice by which the accidents of objects are made to agree with others of the same kind, which are more suitable and plausible in relation to the extrinsic accidents.⁵⁷

These accidents are reduced essentially to two, namely the temperament of light and the state of the eye, and this because perspectival effects vary both as light changes and as the eye moves.⁵⁸ With regard to the temperament of light, Vittone advises the young architect to study what modern philosophers, physicists, and mathematicians have to say about the matter in order to acquire for himself a firm and perfect knowledge of architectonic means, not only with respect to the theoretical aspects of light but to the practical aspects as well.⁵⁹ Vittone then offers his own explanation,

⁵⁶ IBID., p. 242: "Riguarda questa particolarmente le proporzioni: E di queste convien sia l'Architetto, a cui sta a cuore il buon gusto, diligentissimo osservatore."

⁵⁷ IBID., p. 242: "Adattamento finalmente è la scelta, che fra gli altri dello stesso genere si fa di que' trà di loro concordi accidenti degli oggetti, che più confacente, e plausibile hanno la relazione agli accidenti estrinseci, da' quali né dipende la veduta."

⁵⁸ IBID., pp. 242-243: "E questi a due particolarmente si riducono, e sono il temperamento della luce e lo stato dell'occhio. Poichè egli è certo, andarsi gli effetti prospettici d'un' oggetto variando a misura, che a cangiar si vengono gli accidenti della luce, dalla cui illuminazione reso viene quello visibile. [...] Per il che formato lo ha la detta natura mutabile di figura, e di sito; servendole a tal mutazione di mezzo il moto; onde il moto dell'occhio altro è di figura, altro di sito." See FAGIOLO, "L'universo," p. 150; and TAVASSI LA GRECA, *Bernardo Antonio Vittone*, p. 21. On Vittone's principle of Adaptation and the extrinsic accidents pertaining to the "temperament of light" and the "state of the eye," see CAVALLARI MURAT, "Aggiornamento," p. 524.

⁵⁹ VITONE, *Istruzioni elementari*, p. 243: "Trattano della luce egregiamente gli scritti de' moderni Filosofi. E però a quelli potrà avere ricorso il Giovane Architetto, a cui cale il rendersi instruito in tutto ciò, che gli può opportunamente servir di mezzo per acquistarsi una soda, e perfetta cognizione nelle Architetoniche facoltà; sicchè al caso egli si trovi di operare in essa con buona intelligenza, e savio giudico, e di render al Mondo del suo operato soddisfacente ragione. Ma non già solo i lumi teorici, che in stan sparsi, ma ancora quelle cognizione pratiche deve egli sforzarsi d'acquistare, che posson venirgli suggerite dalle osservazioni, che alla giornata può egli fare attorno a que' oggetti, che l'opportunità delle occasioni sotto gli occhi gli porge, col lume però di quei principj sì Fisici, che Matematici, i quale scorgonsi alla verità, ed alla ragione maggiormente appoggiati." See also FAGIOLO, "L'universo," p. 150; TAVASSI LA GRECA, *Bernardo Antonio Vittone*; p. 11.

observing that it is the natural property of luminous rays, as with all fluids, to undergo continuous and successive change as they appear in the far distance from the place whence they depart.⁶⁰ Light propagates itself in straight lines, Vittone explains, but throughout its propagation it is continuously diminished, for which reason it is necessary to alter the proportions, concavities, and projections of the members of the object so that it not appear confused and indistinct to the eye, the eye being put in the place from which the aspect of the said object must be enjoyed.⁶¹

As for the state of the eye, Vittone tells us that it is useful to know both the constitution of the eye and the appearance of the objects relative to the eye's position.⁶² Vittone writes that the component parts of the eye — the crystalline humor, the retina, and the pupil — all undergo movement in response to the various positions and distances of the object and its site.⁶³ More than anything else, however, it is necessary to consider the eye's

⁶⁰ VITTONI, *Istruzioni elementari*, p. 244: "Una cosa finalmente piacemi ancora si avvertisca, ed è, proprietà essere naturale de' raggi, come egli è di tutti i fluidi, il mutar continuamente, e successivamente figura nell' allontanarsi, che fanno dal luogo, onde si partono..." See also FAGIOLO, "L'universo," p. 149.

⁶¹ VITTONI, *Istruzioni elementari*, p. 244: "...come pure diminuirsi nel suo progresso continuamente la luce, e restar perciò necessario alterar le proporzioni de' membri dell' oggetto, e con aggrandirne anche gli concavi, ed aggetti, distinte maggiormente render le parti; affinché confuso, ed indistinto non appaja all' occhio de' riguardanti l'oggetto, posto stando esso occhio, nel luogo, da cui deve l'aspetto di detto oggetto esser goduto [italics mine]."

⁶² IBID., p. 243: "Per quanto poi si è dello stato dell' occhio giova sapere esser egli stato talmente dalla natura costituito, che dentro certi termini conviene vada a seconda della positura, in cui sta l'oggetto, prendendo anche egli una specifica, e determinata positura per ben rimirarlo."

⁶³ IBID., p. 243: "Per il che formato lo ha la detta natura mutabile di figura, e di sito; servendole a tal mutazione di mezzo il moto; onde il moto dell' occhio altro è di figura, altro di sito. Si muove di figura l'occhio, val a dir l'umor cristallino, col farsi or più, or men convesso, seconda la varia distanza, in cui egli si trova dall' oggetto. Si muove poi di sito coll' avvicinare, che fa, più, o meno alla retina lo stesso umore cristallino, secondo che più, o meno resta egli discosto dall' oggetto. Si muove pure di sito quando, per fissarsi nell' oggetto, d'una in un' altra parte diametralmente, o circolarmente, o pur obliquamente, la pupilla di luogo si muta."

position with respect to the height or lowness, the nearness or distance of the object, since it is certain that an object seen from below will always appear smaller than it actually is, while one seen from above, within the bounds of a certain distance, will appear larger, but beyond that distance it will appear smaller.⁶⁴ Similarly, an object seen from a distance always appears smaller than one that is nearer to the eye.⁶⁵ However, the diminution of the object does not occur proportionately to its distance from the eye, as the perspectivists believe, because the center of the eye constantly changes its position in order to see the object under the same visual angle.⁶⁶ The most convenient distance between the object and the eye is that which is double the height as measured along the horizontal axis, and the most commodious angle between the two is 60 degrees.⁶⁷

⁶⁴ IBID., p. 243: "Più d'ogni altra cosa però deesi considerare la positura dell' occhio per rapporto all' altezza, o bassezza; alla vicinanza, o lontananza dell' oggetto. Perchè egli è certo, che un' oggetto guardato di basso in alto minore sempre di quell' appare, ch' essere esso realmente si trova: ed all' opposto, se guardata esso viene d'alto in basso dentro un certo termine di distanza, maggiore della naturale sua grandezza si mostra; ed oltre al detto termine, minore di quel che esso è, naturalmente compare."

⁶⁵ IBID., p. 244: "Similmente pure un' oggetto veduto in lontananza minore sempre appare di quello, che apparirebbe, accostandosi più all' occhio."

⁶⁶ IBID., p. 244: "Non però siegue questa diminuzione dell' oggetto a misura giustamente, o sia a proporzione della di lui lontananza dall' occhio, come pare intendano gli Prospettici, ed appunto accaderebbe, se mutabile non fosse il centro dell' occhio; ma fassi ella relativamente alla positura, in cui trovasi il detto centro dell' occhio: mentre non potendosi questo tanto mutare d'accidente, che a mantener si venga sempre uguale in esso l'angolo visuale, forza è, che col diminuirsi di questo, a diminuir pur anche si venga l'apparenza dell' oggetto."

⁶⁷ IBID., p. 244: "Dato un' oggetto, la di cui fronte esista a perpendicolo, vuolsi, che la di lui distanza fra ogni altra all' occhio più conveniente quella sia, che sta in doppia proporzione all' altezza dell' oggetto misurato dalla visuale orizzontale in sù, poichè suppongono che l'angolo maggiore, che possa comodamente formarsi nella pupilla dell' occhio, sia quello, che equivale ai due terzi d'un retto, val a dire, a gradi 60."

Vittone's Practice

Vittone's concern with light and sight found practical application in his building designs, many of which he describes and illustrates in *Istruzioni diverse*.⁶⁸ Vittone's descriptions themselves, especially those of his church designs, abound in references to illumination and optics. Indeed, Vittone supplies in his treatise 28 descriptions of his church designs, of which 13 contain explicit references to light, vision, sight, the eye, the view, and/or perspective. For example, Vittone tells us that he designed the façade of San Francesco d'Assisi in Turin to provide for proper illumination and sight lines. Because of the pre-existing church's low height, and because of its location on a very narrow site, it is practically impossible, he tells us, for people to enjoy its appearance from afar. He thus designed the façade in such a way that it receive all the light possible reflected from surrounding buildings, and that it provide a convenient view to those who look upon it.⁶⁹

Vittone also designed the monastery and church of the Chierici Regolari in Turin in a manner that enhances illumination. Because the courtyard was disproportionately tall and because it was feared that both it and the rooms surrounding it on the upper floors would not receive enough light and air, he omitted the upper floor loggias and instead inserted terraces

⁶⁸ Vittone's describes his building designs in the second book of *Istruzioni diverse*, entitled "The Estimation of Property, the Standard Italian Mile, Bridges, Constructions, and Ornaments Pertaining to Civil Architecture."

⁶⁹ VITTONI, *Istruzioni diverse*, p. 173: "Per intendere i motivi, per cui si è dovuto questa Facciata disporre nella maniera, che il Disegno dimostra, affine di potere congruamente sulla di lei considerazione profittare; convien sapere trovarsi tale Chiesa situata a seconda, e presso che in attinenza d'una Contrada più tosto angusta, che ampia; di modo che impossibile rendesi il poterne da lungi godere l'aspetto [*italics mine*]; [...] ed aversi in oltre dovuto procurare alla Chiesa, che bassa è nella sua elevazione, tutto il lume possibile; motivo questo, e non ammetteva, egualmente che il primo, d'elevare tale Facciata, sì per non privar essa Chiesa del lume di riflesso, ch' ella riceve dalle Fabbriche, che le stanno davanti, che per non rendere incomodo a' Riguardanti il prospetto."

on three of the sides and rooms on the fourth.⁷⁰ Likewise, Vittone equipped the Certosa at Casotto with two courtyards, one positioned to either side of the church, in order to give light to the corridors.⁷¹

Vittone also designed Santa Maria di Piazza in Turin for the purpose of maximizing illumination. The church was sited on a cramped narrow lot surrounded by other buildings, and to increase the lighting of the church he inserted large windows in the presbytery.⁷² In addition, Vittone introduced hollowed-out pendentives in the presbytery so that the lighting of the whole structure might be evenly obtained and freely diffused from the windows of the dome and thus better illuminate the presbytery.⁷³

Likewise, Vittone designed San Bernardino at Chieri for the purpose of amplifying light. Once again the church met with difficult site constraints. The original fabric, the work of another architect, had collapsed, and Vittone

⁷⁰ IBID., p. 178: "...ma perchè rendevasi questa, a proporzione della grandezza del Cortile civile, apparentemente maggiore del convenevole; cosichè continuandola in pieno fino a tale altezza, vi restava a tenere, che il detto Cortile con Corritori, che vi sono all' intorno, sossero *per riuscire mancanti in parte del loro necessaria per mantenersi salubri* [italics mine]; perciò si pensò a provvedervi con omettere le Logge dell' ultimo Piano, e ridurne in loro vece a tre parti, cioè a Levante, Mezzogiorno, e Ponente, il sito in forma di Terrazzo, e rispetto alla quarta, cioè verso mezzanotte convertirlo in Camere..."

⁷¹ IBID., p. 176: "Al lato sinistro della Chiesa evvi un Cortile colle Officine, ed alla destra un altro Cortile inserviente, egualmente, che quello, a *dar lume ai già mentovati Corritori* [italics mine]..."

⁷² IBID., pp. 180-181: "Imperocchè, *per accrescere il lume, che troppo era scarcio nello stato* [italics mine], in cui di prima si trovava questa Chiesa, determinata essendosi soltanto già la riforma del Presbiterio col di lui alzamento, mandossi questa ad effetto giusta il Disegno, che quivi vedesi espresso; nel qual caso non sendovisi, atteso gl' impedimenti, che esternamente vi erano, *potuto altronde procacciare, che ben poca, la luce, d'uopo fu quella prendere dalla parte di mezzogiorno, per cui esso Presbiterio riguarda il rimanente corpo di Chiesa, disponendovi quivi tre grandi Finestre* [italics mine]."

⁷³ IBID., p. 181: "...ed in tale occasione, affine di dar a questo, per quanto era possibile, nè toglier al Presbiterio la conveniente sua luce, pensai a disporne le parti nel modo, che espresso ivi si vede. Rendesi quivi fra il resto principalmente notabile *lo scavo delle vele del Presbiterio a motivo del passaggio, o sia apertura, ch' egli dà al lume, che vi s'intromette per le Finestre della Cupola; per cui ne segue, che meglio esso lume si può, e più liberamente abasso diffondere, e meglio così rischiarire il detto Presbiterio* [italics mine]."

was obliged to build upon the ruined foundations of a Greek cross plan.⁷⁴ Vittone strengthened the surviving walls with new pilasters and piers and designed a lightweight dome whose form, he proudly tells us, is very different from the usual style.⁷⁵ The same is true of the pendentives and the vaults above the chapels and entrance, all of which are perforated, he explains, in order that light might be diffused across the dome and the church be more vividly brightened.⁷⁶

Vittone's renovation to the presbytery of Sant'Antonio Abate in Turin also serves to increase the illumination of a dark interior caused by a narrow and cramped urban site. Vittone tells us that the pre-existing presbytery was totally without light due to external impediments,⁷⁷ for reason of which he designed a lightweight interlaced ribbed dome which not only facilitates the introduction of the desired lighting but also is beautiful in form.⁷⁸

Similarly, Vittone designed the monastic church of Santa Chiara in Turin for the purpose of providing sufficient illumination. Once again, the

⁷⁴ IBID., p. 182: "Fu questa concepita sulle rovine della Chiesa, che già esisteva in forma quasi d'ottangolo irregolare, e di cui rimasero in piede soltanto le muraglie del Coro, e della Facciata, salve però ed illese intieramente le fondamenta. Ad esse pertanto dovei adattarmi nella produzione di quest' idea; il che feci coll' aggiunta di Lasenamenti, e nuovi Pilastri, sendomi così ella riuscita come si vede."

⁷⁵ IBID., p. 182: "La Cupola, che sopra vi è eretta, e cui stimai tenere leggera, non poco scostasi nella sua forma dallo stile comune."

⁷⁶ IBID., p. 182: "Lo stesso è delle Vele, e delle Volte delle Cappelle, dell' Antipresbiterio, e dell' Ingresso, le quali tutte restano aperte, così che giù diffondendosi per esse il lume della Cupola, passa a rischiarare più vivamente la Chiesa [italics mine]."

⁷⁷ IBID., p. 182: "La privazione totale di luce, in cui già si trovava il Presbiterio [italics mine]; e la poca, che ne godeva il Vaso della Chiesa a cagione degl' impedimenti esteriori [italics mine], furono i motivi, per i quali si progettò tale riforma..."

⁷⁸ IBID., p. 183: "...pensai dovermi, nel disporne la Cupola, valere della maniera, che ivi osservasi, con cui, oltre la bramata luce [italics mine], conseguire insieme potessi, e la leggiadria della forma, e la leggerezza dell' Opera."

church was located on a narrow site hemmed in by public streets and surrounding buildings.⁷⁹ Vittone placed the choir in between two galleries through which, by way of an opening, it receives its lighting.⁸⁰

Vittone designed his unexecuted project for Santa Chiara in Alessandria also for the purpose of brightening a dark interior. It is yet another church cramped by an irregular site of insufficient size,⁸¹ and Vittone tells us that he perforated the pendentives in order to fill the church with a light that was impossible to procure any other way.⁸² In addition, he extended the presbytery into the choir and made the side corridors wide and convenient enough for the nuns there to see the presbytery without themselves being seen by others in the church.⁸³

For his church of Santa Chiara at Bra Vittone devised a double-shelled vault, the lower shell of which he perforated with four large openings so that the spectator below may be able to admire the frescoes painted on the upper shell by means of light introduced through the openings and through

⁷⁹ IBID., p. 183: "Anche in questo caso un sito si aveva per tale formazione assai limitato, e soggetto, stante le due Contrade pubbliche, ed anguste, colle quali esso confina a due parti..."

⁸⁰ IBID., p. 183: "...allorquando si procedette alla formazione della Chiesa, convenne collocare il Coro tra due Gallerie, per l'apertura delle quali deve necessariamente esso *prendere il lume* [italics mine]."

⁸¹ IBID., p. 184: "Egli è ideato sovra un sito irregolare, e d'insufficiente grandezza..."

⁸² IBID., p. 184: "Cosa trovai pure in questo caso opportuna il *fare aperte le Vele, per dare col mezzo di tali aperture al Vaso della Chiesa quel compimento di luce* [italics mine], che altronde procacciarvi restava affatto impossibile."

⁸³ IBID., p. 184: "...e però opportuno parvemi il ripiego d'avanzarne, come ivi vedesi, il Presbiterio nel seno del Coro, disponendone a' di lui lati li Comunicatoj, che restando assai ampj, comoda dar postono, e libera a dette M.M. la vista del Presbiterio, senza esser vedute da chi si trova in Chiesa [italics mine]."

apertures in the gallery vaults.⁸⁴ The gallery is introduced, he tells us, so that the nuns there could enjoy a view of every part of the church.⁸⁵

Likewise, Vittone designed the Sanctuary of Santa Maria della Visitazione at Vallinotto to engender striking luminous and optical effects. Toward this end he stacked three shells, one atop the other, all of them perforated and open, which allow the observer to enjoy, with the aid of light introduced by means of concealed windows, the variety of celestial hierarchies painted on the shells up to the summit of the lantern where, according to Vittone's account, an emblem of the Holy Trinity is represented.⁸⁶ Vittone adds that he had wanted the frescoes to be painted in perspective but that the haste of construction required by the owner prevented the work from being executed in just such a fashion.⁸⁷ Even so, Vittone was able to generate a perspectival diminution by means of the bent-down entablatures that wrap around the side chapels. Years later Vittone again employed the bent-down entablature in the interior arcades of another church, Santa Maria dell'Assunta

⁸⁴ IBID., p. 185: "La volta è doppia, e per quattro grandi aperture, che formate sonosi ne' quattro principali campi dell' inferiore alla vista presentansi di chi sta in Chiesa le Pitture esistenti nella Volta superiore, *coll' ajuto però del lume* [italics mine], che loro prestano gli occhj a lucello, che vi sono all' intorno, e delle aperture, che esistono nelle Volte delle suddette Tribune."

⁸⁵ IBID., pp. 184-185: "...con Tribune al di sopra delle Cappelle, e della Porta; alle quali possono le dette M.M. portarsi per mezzo de' Passaggi, che formati vi si sono al di dietro de' Pilastri; e *godere per ogni parte della vista della Chiesa* [italics mine]."

⁸⁶ IBID., p. 186: "Nel interno pero ella è ad un Piano solo, che formontato va da tre Volte l'una sovra l'altra esistenti, tutte traforate, ed aperte; così che luogo ha la vista di coloro, che si trovano in Chiesa, a spaziare per li vani, che esistono fra esse, e *godere in tal modo coll' ajuto della luce, che vi s'intromette per mezzo di Finestre internamente non apparenti* [italics mine], la varietà delle Gerarchie, che gradatamente crescendo vi si rappresentano in esse Volte, e fino alla sommità del Cupolino, ove espressa vedesi la Santissima Triade."

⁸⁷ IBID., p. 186: "Era mio pensiero, che *l'aspetto di tale pitture fosse in degradazione prospettica* [italics mine], ma la fretta dell' esecuzione bramata dal suddetto Signore non permise, che intieramente riuscisse il desiderato effetto dell' Opera."

at Grignasco, to produce a similar perspectival diminution, a solution that he judged, in this case, to be happily successful and satisfactory to the sight of the people who saw it.⁸⁸

Even many of Vittone's ideal churches projects, designed for his own personal satisfaction and not meant to have been built, are largely informed by his desire to frame views and to satisfy the beholder's eye. For example, Vittone's design for "a very grand parish church" will not fail, in his estimation, to give satisfaction and pleasure to the observer whose eye can easily range across the breadth and varied spaces of the whole structure.⁸⁹ Likewise, Vittone's design for an "ideal cathedral," a three-aisled Latin cross with a grand dome above the crossing, will not fail, he boasts, to please the eye, and this because the succession of openings in its aisles leaves the spectator's eye free to range the length of the church and fully enjoy all its varied aspects.⁹⁰ In addition, his two designs for a parish church "to be built

⁸⁸ IBID., p. 178: "...motivo, per cui credei dovere in un colle Arcate l'Ordine pure *disporre in degradazione prospettica* [italics mine]; cosa, che riuscita mi è assai felicemente, nè *senza appagamento nel suo aspetto delle Persone intelligenti, che la videro* [italics mine], seconda mi fu da esse accettato."

⁸⁹ IBID., p. 188: "...cosa, che per l'ampiezza, e varietà dello spazio, che all'occhio presenta [italics mine], e per il comodo, che a lui dà di vagamente spaziare per esse, massimamente anche pure per la disposizione, e per gli ornamenti, di cui vanno dotate, non può a mio intendere, che riuscire ad esso di *tutta sua e soddisfazione, e compiacimento* [italics mine]."

⁹⁰ IBID., pp. 188-189: "...l'idea d'un Duomo da me per mera mia soddisfazione escogitata sulle misure d'un dato sito in occasione, che sparsa erasi voce, che si trattasse di farvi una simile Fabbrica erigere, per surrogarla ad altra antica, che pretendeasi doversi poscia annullare. Ideata è questa Fabbrica a tre Navate formanti una Croce Latina, a cui accordato va nel mezzo un Ottagono, sul quale vien disposta di corpo doppia una gran Cupola, per la cui più facile intelligenza disegnato vedesi quivi un quarto della di lei Pianta. Degna mi sembra di riflessione in quest' idea la successività dell' aperture delle Navate minori, la quale rettamente di lungo in lungo continuando per tutta l'estensione della Chiesa, lascia all'occhio la liberà di potersi a suo piacere per essa distendere, e pienamente in tal modo de' *varj di lei aspetti godere* [italics mine]." OLIVERO, *Le opere*, p. 72, identifies Vittone's project as a design for the Nuovo Duomo in Turin. However, G. RODOLFO, "L'architettura barocco in Carignano," *Atti della Società Piemontese di Archeologia e Belle Arti* XV-XVI (1937), pp. 130-186, here pp. 145-146; and C. ARDUINO, "Note su alcuni progetti vittoniani per edifici carignanesi," in *Carignano. Appunti per una lettura della città*, 4 vols. (Carignano, [1978]), IV, pp. 23-52, here pp. 24-26, figs.

in a place not having too large a population” are not lacking, he tells us, in sufficient arrangements and ornaments which, on account of the novelty of elements they contain, are rendered graceful and pleasing to the sight.⁹¹ Finally, Vittone devised several designs for doors and windows that produce a pleasing effect on the eye, due as much to the bizarre and charming composition of the design as to the beauty of the assortment, the form, and the proportion of parts.⁹²

Illusion

Vittone's Theory

For all the importance Vittone placed on the operations of light and sight he was quite skeptical of the eye's capacity to fathom the true state of things. It is a skepticism borne of his notions of the temperament of light and the state of the eye, the two extrinsic accidents that, as he defines them, are dependent upon sight. As explained above, Vittone understood light to be continuously diminished as it propagates itself over distance, for which reason it is necessary to alter the proportions, concavities, and projections of the

14-16, identify it as a design for a church commissioned in 1755 by the community of Carignano, a commission that was in all probability secured for Vittone by Giovanni Battista Galletto, a Carignanese architect and Vittone's assistant who helped draw up both *Istruzioni elementari* and *Istruzioni diverse* for publication, and who earlier, in 1750, had aided Vittone in erecting the Ospizio di Carità at Carignano.

⁹¹ VITTONI, *Istruzioni diverse*, p. 185: “Non poco hanno tali idee del semplice, del regolare, e del comodo, non mancando tuttavia di quella disposizione, e di quei ornamenti, che *render le posson leggiadre, e per la novità, di cui dotate vanno, aggradevole* [italics mine].”

⁹² IBID., p. 155: “Varj Disegni di Porte, e Finestre rappresentano le Tavole 23 e 24 tutt' ideati uniformemente ad altri cosimili già da me estratti da Fabbriche di buoni Autori, ed osservati sortire in opera *un effetto assai piecevole all'occhio; accidente questo, cui non v'ha dubbio procedere non già tanto dalla bizzaria, e vaghezza della composizione* [italics mine], quanto anche del bello assortimento, che e nella forma, e nelle proporzioni delle parti a conseguire ne viene il complesso.”

members of the object viewed so that it not appear confused and indistinct to the eye. And it is due in part to this contingent condition of light that the empirical capacity of eyesight to ascertain the true nature of things cannot be entirely trusted. Likewise, Vittone understood the eye to undergo movement in a manner that, depending on the eye's position and distance with respect to the object viewed, modifies the appearance of the object. In short, Vittone understood eyesight to be fallible, due as much to the inconstant nature of light as to the imperfect operation of the eye.

Vision is fallible. It can be deceived. So that what is true often appears to the eye as false, and what is perfect often appears flawed,⁹³ hence the need for optical adjustments to compensate for the false appearance given by the true.⁹⁴ Not only the eye, but the judgment that informs it is also faulty and cannot always be depended upon to correct optical deceptions. For this reason it is necessary for the architect to alter the proportions, concavities, and projections of the members of the object so that it not appear confused and indistinct to the eye.⁹⁵

Vittone's notion that sight is fallible — that the true can appear to the eye as false, that the perfect can appear imperfect, that the well proportioned body can appear awkward and malformed, and that, consequently, the circumstances of objects must necessarily be altered so as to appear to the eye

⁹³ IDEM., *Istruzioni elementari*, p. 396: "...onde, perchè il vero ci pare falso, e i copri ben porzionati tal non appariscono..."

⁹⁴ IBID., p. 396: "...cosa rendesi assolutamente necessaria il cangiare giusta le circostanze de' case le proporzioni degli oggetti, aumentandone le grandezze, sicchè ad apparire eglino vengano all' occhio, quali ei gli desidera."

⁹⁵ IBID., p. 244: "...come pure diminuirsi nel suo progresso continuamente la luce, e restar perciò necessario alterar le proporzioni de' membri dell' oggetto, e con aggrandirne anche gli concavi, ed aggetti, distinte maggiormente render le parti; *affinchè confuso, ed indistinto non appaja all' occhio de' riguardanti l'oggetto* [italics mine]..."

as desired — this notion is rooted in the architectural theory of Vitruvius to whom the same building may look one way when seen close at hand, another way from a height, still another way in an enclosed place, and still yet another way in the open.⁹⁶ Vitruvius writes:

The fact is that the eye does not always give a true impression, but very often leads the mind to form a false judgment [...] Now whether this appearance is due to the impact of the images, or to the effusion of the rays from the eye, as the physicists hold, in either case it is obvious that vision may lead us to false impressions.⁹⁷

And,

Since, therefore, the reality may have a false appearance, and since things are sometimes represented by the eyes as other than they are, I think it certain that diminutions or additions should be made to suit the nature or needs of the site, but in such fashion that the buildings lose nothing thereby. These results, however, are also attainable by flashes of genius, and not by mere science.⁹⁸

Thus Vitruvius requires that the dimensions of the column be varied according to the proportions of the intercolumniations — the wider the intercolumniation, the thicker the shaft.⁹⁹ So too the corner column should be made thicker than the others since its sharp outline, produced by the unobstructed air around it, would normally make the column appear slenderer than it actually is.¹⁰⁰ Hence, “we must counteract the ocular

⁹⁶ VITRUVIUS, *Ten Books*, VI, ii, pp. 174-175.

⁹⁷ IBID., VI, ii, 2-3, p. 175.

⁹⁸ IBID., VI, ii, 4, p. 175.

⁹⁹ IBID., III, iii, p. 84.

deception by an adjustment of proportions.”¹⁰¹ Vitruvius also asserts that the horizontal plane of a temple’s stylobate must not be level, but be raised along the middle in order to counteract an ocular deception, “for if it is laid perfectly level, it will look to the eye as though it were hollowed a little.”¹⁰²

Throughout the course of the Renaissance and Baroque periods in Italy, the notion became firmly established that the subjective judgment of the artist’s eye is ultimately more reliable than objective mathematical calculations in the making of optical adjustments. Michelangelo (1475-1564), for example, held that the artist “must have his compasses in his eyes and not in his hand because the hands toil while the eye makes judgments.”¹⁰³

Likewise, Giorgio Vasari (1511-74) stressed the importance of the artist’s good taste and judgment, asserting that no better measure is available to the artist than the judgment of his eye. Whatever offends the eye must be corrected, no matter how perfectly measured it may be. It is necessary thus for the artist to alternately add and subtract from the work of art until it assumes that state of proportion, grace, design, and perfection which will meet the complete approval of the best taste and judgment.¹⁰⁴

¹⁰⁰ IBID., III, iii, p. 84.

¹⁰¹ IBID., III, iii, p. 84.

¹⁰² IBID., III, iv, p. 89.

¹⁰³ Michelangelo’s dictum, “bisognava avere le seste negli occhi a non in le mani, perchè le mani operano e l’occhio giudica” is printed in G. VASARI, *Le opere di Giorgio Vasari*, with new notes and comments by G. Milanesi, 9 vols. (Florence, 1878-85), VII, p. 270, and cited in G.C. BAUER, “From Architecture to Scenography: The Full-Scale Model in the Baroque Tradition,” in A. Schnapper, ed., *La scenografia barocca* (Bologna, 1982), pp. 141-149, here p. 141, note 3 on p. 147.

¹⁰⁴ VASARI, *Le opere*, I, 151: “Ma non si debbe usare altra miglior misura che il giudicio dell’occhio; il quale, sebbene una cosa sarà benissimo misurata ed gli ne rimanga offeso, non resterà per quest di biasimarla. Però diciamo, che sebbene la misura è una retta moderazione da ringrandire le figure talmente, che le altezze e le larghezze, servato l’ordine, facciano l’opera proporzionata e graziosa, l’occhio nondimeno ha poi con il giudicio a levare e ad

Gian Lorenzo Bernini (1598-1680) also emphasized the primacy of the eye. In response to remarks made by the architect and scenographer, Carlo Vigarani, that geometry and perspective were indispensable to the architect, Bernini stated that one of the most important things was to have a good eye. This is because “things appear to us not simply as they are, but change their appearance in relation to what surrounds them.”¹⁰⁵

Guarino Guarini (1624-83) followed Bernini in affirming that the visual impression of things is both subjective and relative, conditioned less by the correct application of geometry and proportion than by the vagaries of viewpoint and setting. This is because buildings are necessarily seen at different distances and from different positions. Thus in order to please the eye it is incumbent on the architect, so Guarini writes in words reminiscent of both Vitruvius and Vasari, to subtract from and to add to the proportions because one object is positioned below eye level, another is positioned on high, another in an enclosed space, and another in the open.¹⁰⁶ And according to Guarini, there is no secure rule to guarantee that the object will be pleasing when actually seen. Therefore, in order to please the eye and ensure the appearance of the proper proportion, the architect must actually depart from

aggiungere secondo che vedra la disgrazia dell'opera, talmente, ch'e' le diagiustamente proporzione, grazia, disegno e perfezione, accioché ella sia in sé tutta lodata da ogni ottimo giudicio.”; cited in BAUER, “From Architecture,” p. 141, note 4 on p. 147.

¹⁰⁵ P. FRÉART DE CHANTELOU, *Journal du voyage du Cavaliere Bernin en France*, edited by L. Lalanne (Paris, 1885), p. 114: “Le Cavaliere a ajouté [...] que les choses nous paraissent non seulement ce qu'elles sont, mais eu égard à ce qui dans leur voisinage, qui change leur apparence.”; cited in BAUER, “From Architecture,” p. 142, note 5 on p. 147.

¹⁰⁶ GUARINI, *Architettura civile*, Trat. I, cap. 3, oss. 7, p. 18: “...per compiacere agli occhi, si dee levare, o aggiungere alle Simmetrie, essendo che altro un oggetto appare sotto l'occhio, altro appare in alto, altro in un luogo chiuso, altro in aperto...” See also BAUER, “From Architecture,” p. 142.

true proportions and rely instead upon his own eye and judgment to correct the apparent distortion.¹⁰⁷

There are two principal reasons, according to Guarini, why well-proportioned buildings may appear to be deformed and unpleasant to the sight. One is when the power of our imagination, which is responsible for comparing and judging forms, makes a faulty judgment due to the distortion caused by things closely situated to the viewed object. The other is when the objects on the site have to be viewed from a place either too near or too far.¹⁰⁸ The first deception cannot be corrected, except by good judgment and knowledge of how the various objects appear on such occasions in order that the architect can provide a convenient remedy.¹⁰⁹ The second deception, however, can be corrected by a certain rule.¹¹⁰ Still, while the spectator's imagination can occasionally be deceived by the view, it is ruled by a "judgmental power" which frequently, but not always, is able to correct the errors of the eye, either in whole or in part.¹¹¹ Thus correction is not always or

¹⁰⁷ GUARINI, *Architettura civile*, Trat. I, cap. 3, oss. 7, p. 17: "...se il senso s'inganna, come molte volte adivene, giudicando un oggetto diritto per istorto, ed altro retto per pendente, e uno grande per piccolo, sarà necessario in questo caso soddisfarlo, e compiacere, acciocché quello che gli sembra mancante, benché non sia, con aggiungere più del dovere, gli sembri giusto."

¹⁰⁸ IBID., Trat. III, cap. 21, p. 242: "Due cagione principali possono una e ben proporzionata architettura in sé far parere deforme, e spiacevole agli occhi nostri. Una è la forza della nostra immaginativa, che paragona e giudica, quando distornata dalle cose vicine degli oggetti veduti, forma sinistro giudizio. L'altra cagione principale è il sito, quando, o debbono esser mirati gli oggetti, o da luogo troppo vicino, o troppo lontano."

¹⁰⁹ IBID., Trat. III, cap. 21, p. 242: "Il primo inganno non si può emendare, se non con un buon giudizio, a con sapere come in tale occasione appariscono gli oggetti, affinché l'architetto possa dare il conveniente rimedio..."

¹¹⁰ IBID., Trat. III, cap. 21, p. 242: "...l'altro inganno ha qualche regola certa che lo corregge."

¹¹¹ IBID., Trat. III, cap. 22, oss. 6, p. 255: "Benché più di una fiata l'immaginazione si lasci ingannar dalla vista, è però anche certo che in molte occasioni la forza giudicativa corregge gli errori degli occhi, o in tutto o in parte..."

entirely necessary since some part of the correction may be left to the spectator's judgment.¹¹² In short, although architecture depends on mathematics, it must not offend the eye in the name of reason. Guarini's position is unequivocal: "if the eye be affronted by adherence to mathematical rules, then change them, abandon them, and finally contradict them."¹¹³

Vittone himself was largely influenced by Guarini's ideas. This is manifest especially in his treatment of optical corrections in *Istruzioni elementari* in which he discusses the diminution of columns, the placement of the orders one above the other, and the proportioning of objects according to their different distances from the eye.¹¹⁴ Vittone observes that if one were to proportion a body well and render it pleasing to the eye, nothing more is required than to compose and harmonize the members among themselves.¹¹⁵ Towards this end, however, few architects possess more than a mediocre talent by which their art is able to achieve great renown in the world.¹¹⁶ The truth of the matter, Vittone tells us, is that little or nothing helps the architect to know how to adjust the members well if the art does not at the same time

¹¹² IBID., Trat. III, cap. 22, oss. 6, p. 255: "...onde si conchiude, che non sempre è necessaria la correzione, o non così rigorosa, lasciando anche qualche parte di essa al giudizio."

¹¹³ IBID., Trat. I, cap. 3, pp. 10-11: "L'architettura, sebbene dipenda dalla Matematica, nulla meno ella è un Arte adultrice, che non vuole punto per la ragione disgustare il senso: onde sebbene molte regole sue sieguano i suoi dettami, quando però si tratta, che le sue dimostrazioni osservate siano per offendere la vista, le cangia, le lascia, ed infine contradice alle medesime."

¹¹⁴ VITONE, *Istruzioni elementari*, pp. 387-407.

¹¹⁵ IBID., p. 387: "Se per proporzionar bene un Corpo, e renderlo all' occhio aggradevole, altro non si richiedesse, che ben accordarne fra loro le membra, che lo compongono..."

¹¹⁶ IBID., p. 387: "...pochi cred' io, sarebbono gli Architetti, ai quali, tutto che di non più, che mediocre ingegno dotati, l'animo non dasse d'acquistarsi coll' Arte loro al Mondo gran nome..."

accord them all to the accidents which accompany the cases.¹¹⁷ Vittone devotes a chapter of his treatise to a discussion of how to proportion various bodies and objects by which a building is composed so that the appearance of its proper symmetry is saved, and so that, as far as possible, a mutual agreement in the forming of the whole in itself is well harmonized and complete.¹¹⁸

Vittone first considers the disposition of superimposed columns. There are two principle things, he writes, which determine the good and regular disposition of columns to be elevated one above the another in the composition of the façade, and these are their diminution and the manner or state in which they are employed, that is to say, whether they be free-standing or encased within the wall.¹¹⁹ Among the necessary maxims to be observed in such dispositions, the first to consider is the desire to make the orders succeed one another in such a manner that the stronger and more solid is found at the bottom and the more delicate above, so that the Corinthian is placed under the Composite, the Ionic under the Corinthian, the Doric under the Ionic, and the Tuscan under the Doric.¹²⁰ Because things ordinarily have extremes beyond

¹¹⁷ IBID., p. 387: "...ma la verità sta, che poco, o nulla giova il sapere nelle sue membra semplicemente ben quello aggitare, se insieme l'arte ancora non si ha, d'accordare quelle tutte agli accidenti, che i casi specialmente accompagnano."

¹¹⁸ IBID., p. 387: "Quindi è, che stimato si è necessario di discorrere in questo Capo della maniera di proporzionare fra loro gli varj corpi, ed oggetti, che hanno a comporre un' Edificio, sicchè, salva l'apparenza delle proprie loro simmetrie, scambievolmente convengano nel formare un tutto in se, per quanto è possibile, ben armonizzato, e compiuto."

¹¹⁹ IBID., p. 388: "Due principali sono le cose, nella cui determinazione tutta richiedesi l'attenzione dell' Architetto, affine di bene, e regolarmente disporre le colonne, che nella costituzione dell' facciate a più ordini venir debbono le une su le altre elevate, e sono queste, cioè la loro degradazione, ed il modo, o stato, in cui hanno a restar impiegate nel loro ordine, cioè se isolate, ovvero incassate nel muro."

¹²⁰ IBID., p. 388: "Fra le massime, che d'uopo resta osservare in tale disposizione, la prima a considerarsi esser vuole quella di far gli ordini gli uni agli altri succedere in modo, che gli più

which imperfections draw fast, it is necessary to diminish the columns, which are placed one above the other in various planes so that the pedestals of the upper columns are equal to the tops of the ones below (Figure 2.1).¹²¹ The resultant diminution corresponds to that of the trunk of a great tree, whose natural pyramidal tapering renders a pleasing view to the eye.¹²² In this way one will not encounter the painful sight of the animated thread of a column carrying itself beyond that of the other which succeeds it in height (Figure 2.2).¹²³

Vittone next considers the ways to vary the size of an object in order to maintain the appearance of its proportions according to its different distances

sodi, e forti a trovare si vengano al di sotto, e gli più delicati al di sopra: che però sotto il composito dovrà collocarsi il Corinthio, sotto il Corinthio il Ionico, sotto il Ionico il Dorico, e sotto il Dorico il Toscano.”

¹²¹ IBID., p. 390: “Ma perchè le cose, che riconoscon la Natura per Madre, hanno per l’ordinario i suoi estremi, ai quali è vizio fuor de’ casi estremi l’accostarsi; perciò di dovere sarà nel degradar le colonne, che hanno a venir una sopra l’altra in diversi piani collocate, il non servirsi, che di quelle fra la sovr’ addotte maniera, che sono a qualche sorta di maggior fondamento appoggiate, quale a preferenza d’ogni altra si è quella, di far il piede delle colonne superior eguale alla sommità delle rispettive loro prossimamente inferiori...” See CAVALLARI MURAT, “Aggiornamento,” p. 468, fig. 10.

¹²² VITTONI, *Istruzioni elementari*, p. 390: “...stante le bella dolce, e naturale diminuzione, che loro ne avviene corrispondentemente a quella d’un grand’ albero, che per la naturale sua piramidale decrescenza rende di se stesso molto all’ occhio la vista aggradevole...” Vittone repeats this point in two other passages from the same treatise, IBID., p. 258: “Comunemente il fusto delle Colonne é diminuito nella sommità d’una sesta parte del loro diametro inferiore a rassomiglianza degli alberi, che salendo diminuiscono.”; p. 278: “Devono inoltre le Colonne venir per ogni parte nell’ ascensione loro insensibilmente diminuzione cominciare dal piede, ed andar successivamente fin alla cima proseguendo; benchè paja che tanto insegnar ci voglio la Natura colla piramidale decrescenza da essa praticata nella costituzione dello stipite degli Alberi...” Vittone fashioned this position after a passage in VITRUVIUS, *Ten Books*, V, i, p. 132: “The columns of the upper tier should be one fourth smaller than those of the lower, because ... we ought to imitate nature as seen in ... round smooth-stemmed trees, like the fir, cypress, and pine, every one of which is rather thick just above the roots and then, as it goes on increasing in height, tapers off naturally and symmetrically in growing up to the top. Hence, if nature requires this in things growing, it is the right arrangement that what is above should be less in height and thickness than what is below.”

¹²³ IBID., p. 390: “...oltrecche non incontrerà questo la pena di veder il filo del vivo d’una colonna a portarsi fuori di quello dell’ altra, a cui succede in altezza.” See CAVALLARI MURAT, “Aggiornamento,” p. 468, fig. 11.

from the eye.¹²⁴ According to Vittone, nothing manifests the architect's genius better than his knowledge of how to proportion his work in such a manner that the eye, which beholds it, is left satisfied and fully contented.¹²⁵ Because of various distances and heights, the size of the objects represented to the eye is diminished.¹²⁶ Thus the true oftentimes seems false, and because the well proportioned body may not always appear as such, it is absolutely necessary to change the circumstances of the proportions of the objects, augmenting the size, so as to appear to the eye as desired.¹²⁷ For this purpose, Vittone cites the Vitruvian principle that all the members existing above the capitals of the columns must be inclined forward a twelfth part of their height, since objects elevated perpendicular above the horizontal necessarily seem to be leaning and overturned backwards, and that in this manner such objects are corrected so as to appear to be plumb.¹²⁸ Columns of greater heights require fewer diminutions on account of their greater distance from the eye.¹²⁹ Again,

¹²⁴ VITONE, *Istruzioni elementari*, pp. 396-403.

¹²⁵ IBID., p. 396: "Non v'ha cosa, in cui meglio si palesi l'ingegno dell' Architetto, che nel sapere proporzionare le sue Opere in modo, che tali dimostrandosi in apparenze, quali l'Arte, e Natura gli vogliono, se ne trovi l'occhio pago, e pienamente contento."

¹²⁶ IBID., p. 396: "Le distanze, e le altezze diversamente da quel, che sono, rappresentano all'occhio gli oggetti, diminuendone le grandezza..."

¹²⁷ IBID., p. 396: "...onde, perchè il vero ci pare falso, e i copri ben proporzionati tal non appariscono, cosa rendesi assolutamente necessaria il cangiare giusta le circostanze de' case le proporzioni degli oggetti, aumentandone le grandezze, sicchè ad apparire eglino vengano all'occhio, quali ei gli desidera."

¹²⁸ IBID., p. 396: "A tal proposito varj Precetti ci lasciò scritti Vitruvio. Insegna egli al lib. 3. cap. 3. dover gli membri tutti, ch' esistono superiormente ai Capitelli delle colonne pendere al davanti la duodecima parte della loro altezza, dicendo che le cose a perpendicolo elevate sopra la nostra orizzontale hanno a sembrare pendenti, e roversciate all' indietro, e che corretti in tal guisa gli oggetti ci debbano parere a piombo..."

¹²⁹ IBID., p. 396: "...e parlando delle diverse altezze delle colonne, assegna alle più alte minore diminuzione, a cagione della maggiore distanza loro dall'occhio."

Vittone derives this principle from Vitruvius according to whom the degree of diminution at the top of the column is regulated by the height of the column itself, so that the higher the column the proportionately less the diminution.¹³⁰

Vitruvius also holds that proportional adjustments must be made in the thickness of columns due to the different heights to which the eye has to climb.¹³¹

For the eye is always in search of beauty, and if we do not gratify its desire by a proportionate enlargement in these measures, and make compensation for ocular deception, a clumsy and awkward appearance will be presented to the beholder.¹³²

Vittone explains that Vitruvius gives little thought to the inclination of members standing above the capitals of columns because such an operation would transgress the inviolable principle of Firmness (*Sodezza*) which demands that buildings be perpendicular, and because the overhang would cause too much deformity in the side of the façade to be built.¹³³ Still, it is clear to Vittone that, whatever Vitruvius may have thought on this matter, from Vitruvius's time until his own day architects have studied how to correct the deceptions and defects that result from a building's perfection that tricks the eye.¹³⁴ And in truth, the knowledge of how to proportion an object in all

¹³⁰ VITRUVIUS, *Ten Books*, III, iii, p. 86.

¹³¹ IBID., III, iii, p. 86.

¹³² IBID., III, iii, p. 86.

¹³³ VITTORE, *Istruzioni elementari*, pp. 396-397: "Certamente rispetto all' inclinazione suddetta de' membri, che soprastanno ai capitelli delle colonne, poco bene ebbe a pensare Vitruvio, sì perchè, in tal modo operando, a peccare verrebbe contro le massime inviolabili della sodezza, le quali esigono negli Edifizj il perpendicolo, sì perchè troppa sarebbe la deformità, che tale strapiombo apporterebbe all' aspetto del fianco delle facciate, nelle quali verrebbe eseguito."

its parts in a such manner that it appears to the eye as desired is such a difficult enterprise, given the diversity of accidents, that architects throughout the ages, even those possessed of an elevated and shrewd intelligence, have had to break a sweat.¹³⁵ The search for a solution to the difficulty has challenged the intelligence not only of architects, but also of philosophers themselves, even if little or nothing is left in writing.¹³⁶ Architects have generally proceeded thus, relying upon nothing else than the shrewdness of their judgment without recourse to theoretical and masterly knowledge.¹³⁷

Vittone proceeds to give a long and cumbersome discourse on the relative positions, angles, and sizes of objects viewed with respect to their various distances from the eye. He concludes that the too long and subtle discussions of boundaries and optical accidents that indispensably demand research and the establishment of a method of investigation, accords itself little with the leisure and the ability of an architect whose practice occupies him continuously in other exercises, for which reason it is sufficient to leave the precision of the truth to the physicists and mathematicians.¹³⁸ In its place,

¹³⁴ IBID., p. 397: "Qualunque però si sia il pensiero di Vitruvio, d'mostra chiaramente, che già fin da' suoi tempi studiavano gli Architetti sulla maniera di correggere i difetti, che alla perfezione delle Fabbriche apporta l'inganno dell' occhio."

¹³⁵ IBID., p. 397: "Ed in vero il sapere secondo la diversità degli accidenti ben proporzionare in tutte le sue parti un' oggetto sì fattamente, che tale all' occhio appaja, quale ei lo desidera, impresa si è di tale difficoltà, che n'ebbero in ogni tempo a sudare gli Architetti anche d'ingegno più elevato, e sagace."

¹³⁶ IBID., p. 397: "Per quanto però di buona circa lo scioglimento di tale difficoltà trovato abbia la sagacità non già solo degli Architetti, ma de' Filosofi stessi ancora, poco, o nulla si vede lasciato in iscritto..."

¹³⁷ IBID., p. 397: "...sicchè con non altro lume costretti comunemente si trovano a procedere in tal particolare gli Architetti, se non se con quello, che prestare lor può l'accortezza del loro giudizio, privo però, qual trovasi, d'ogni teorico, e maestrevolle conoscimento."

¹³⁸ IBID., p. 401: "Ma la troppo lunga, e sottile discussione de' termini, ed accidenti Ottici, ch' indispensabilmente esige la ricerca, e lo stabilimento d'un tale sistema, poco accordandosi coll' ozio, e coll' abilità d'un Architetto, cui il pratico di lui Officio tiene di continuo occupato

Vittone gives the young architect a practical method, not far removed from probable terms, to render sufficient satisfaction to the eye according to the accidents of the case, within the mediocrity of the terms, in which, by virtue of its own natural organization with the opportune mutation of its parts, one is able to conveniently adapt the disposition of visual rays to the various distances.¹³⁹

Vittone also treats the art of perspective,¹⁴⁰ no doubt aided in this endeavor by the many treatises that he owned on the subject, including Andrea Pozzo's *Perspectiva pictorum*, Ferdinando Galli Bibiena's *Varie opere di prospettiva*, Giuseppe Galli Bibiena's *Architetture e prospettive*, all discussed above, as well as Daniele Barbaro's *Pratica della prospettiva*¹⁴¹ and Giulio Troili's *Paradossi per praticare la prospettiva*.¹⁴² Vittone begins by marveling at the admirable structure of the human eye made by the Divine Creator with such artifice, and with such great variety of humors, tunicates, and arranged nerves that the visible rays proceeding from the object, necessarily refracted

in altri esercizj, sufficiente cagione sarà, per cui, lasciata a' Fisico-Matematici la precisione del vero..."

¹³⁹ IBID., p. 401: "...a proporre io prenda agli Architetti alcun metodo pratico, che da' termini del verisimile non scostandosi, presenti all' occhio, secondo gli accidenti del caso, un sufficiente appagamento, dentro la mediocrità però di que' termini, ne' quali può egli in virtù della propria naturale organizzazione coll' opportuna mutazione delle sue parti convenientemente adattare alle varie distanze la visiva sua disposizione."

¹⁴⁰ IBID., pp. 527-547. On Vittone's treatment of perspective, see also L. VAGNETTI, *De naturalis et artificiali perspectiva – bibliografia ragionata delle fonti teoriche e delle ricerche di storia della prospettiva; contributo alla formazione della conoscenza di un'idea razionale, nei suoi viluppi da Euclide a Gaspard Monge* (Florence, 1979), p. 455, no. EIVb43.

¹⁴¹ D. BARBARO, *La pratica della prospettiva* (Venice, 1568). On the listing of Barbaro's treatise in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 250, no. 679.

¹⁴² G. TROILI, *Paradossi per praticare la prospettiva senza saperla; fiori, fiori per facilitare l'intelligenza; frutti per non operare alla cieca. Cognizioni necessarie à Pittori, Scultori, Architetti, ed a qualunque si diletta di disegno* (Bologna, 1672; 2nd ed., Bologna, 1683). On the listing of Troili's treatise in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 250, no. 669.

and appropriately gathered, represent upon the eye an image of the object.¹⁴³ Other external rays, reflected and recast, help to regulate the image so that it appears vivid to the eye.¹⁴⁴ Vittone states that it is in his capacity as a diligent investigator and imitator of nature that the human derives the art of perspective.¹⁴⁵ As in a mirror in which the various objects (both near and far away) are seen, so human intelligence, ever eager for new inventions, has taken from nature the stimulus to imitate it.¹⁴⁶

A similar discovery, Vittone writes, was just too much to satisfy the curiosity and the ambitions of the great painters, who not only hope to gain reward, but also to win the affection of studious persons by employing every industry to attempt to record the beauty of the countryside, the height of mountains, the grandeur of buildings, and the poverty of huts.¹⁴⁷ In these

¹⁴³ VITTORE, *Istruzioni elementari*, p. 527: "L'Ammirabile struttura dell' occhio dal Divin Facitore con tanto artificio, e con sì grande varietà d'umori, tuniche, e nervi composta per cui ne addivene che li raggi visivi, che dagli oggetti vi si tramandano, venendo altri intromessi, e con opportuna refrazione congruamente raccolti, l'immagine al senso ne rappresentino..." See also FAGIOLO, "L'universo," p. 151.

¹⁴⁴ VITTORE, *Istruzioni elementari*, p. 527: "...ed altri esternamente con ben ordinata riflessione rigettati apparire similmente ne facciano agli altrui occhi dentro l'occhio stesso viva, e regolare l'immagine..." See also FAGIOLO, "L'universo," p. 151.

¹⁴⁵ VITTORE, *Istruzioni elementari*, p. 527: "...può dirsi essere quella, da cui l'Uomo diligente investigatore, ed imitatore della Natura ha tolto il pensiero dell' Arte Prospettica..." See also FAGIOLO, "L'universo," p. 151.

¹⁴⁶ VITTORE, *Istruzioni elementari*, p. 527: "...poichè al considerar, che nell' occhio vedonsi da chi in esso mira ben rappresentati, e come dalla Natura fu purissimo specchio dipinti i varj oggetti e vicini, e lontani, che se gli paran d'avanti, è facil cosa il credere, che avido, ed ambizioso l'umano ingegno di nuove invenzioni, abbia da ciò preso stimolo ad imitar coll' arte quanto operato vedeva dalla Natura." See also FAGIOLO, "L'universo," p. 151.

¹⁴⁷ VITTORE, *Istruzioni elementari*, pp. 527-528: "Un simile ritrovamento troppo era proprio a soddisfare la curiosità, ed ambizione de' Grandi, per tosto non impegnarne colla speranza del premio, e del guadagno l'animo delle Persone studiose ad impiegarvi ogni industria, affin di procurarne negli Appartamenti loro, e vive in ogni tempo mantenerne, ed al naturale espresse la vaghezza delle Campagne, l'asprezza de' Monti, la bellezza de' Palaggi, e la meschinità delle Capanne."

noble efforts many have achieved a laudable success.¹⁴⁸ Making use of the light of geometry and the various rules of art itself, and of parallel and convergent lines suitably colored and shaded, they have reached such a perfection that the eye of the person who looks upon them is deceived, not easily distinguishing the difference between nature and the simple painting.¹⁴⁹ Such an impression, for example, can be perceived by those in Piedmont who fix their eyes on the paintings of the virtuoso Giuseppe Dallamano who, in royal buildings as well as in public and private ones, has given proof of his perfect and commendable skill in this art.¹⁵⁰ If the art of perspective is useful for the good disposition of objects, Vittone continues, then we should also praise the art of that celebrated architect, the abbot Filippo Juvarra, who without the aid of normal rules, but using only the necessary proportion and disposition of the objects, obtained the same effects.¹⁵¹

Vittone here echoes Vitruvius who himself marveled at the deceptions wrought by the perspectivists. Vitruvius states that eyesight is often deceived as in the case of paintings in which architectural elements appear to project or

¹⁴⁸ IBID., p. 528: "In si nobile impegno hanno moltissimi fatto assai lodevole riuscita."

¹⁴⁹ IBID., p. 528: "Escogitate questi col lume della Geometria, e dell' Arte stessa varie regole, e di lineamenti valendosi e paralleli, e convergenti, e congruamente li colori, ed ombreggiamenti maneggiando, a segno tale si sono in quest' Arte portati, che dalle Opera loro ben spesso ingannato rimane l'occhio di chi le mira, non facilmente discernendo dalle produzioni della Natura, e dalla reale esistenza ciò, che per altro non è, che semplice pittura..."

¹⁵⁰ IBID., p. 528: "...cosa che accade a chi in Piemonte fissa l'occhio nelle Opere del pennello di Giuseppe Dallamano, che in più luoghi si veggono sparse sì ne' Regj, che ne' pubblici, e privati Edifizj, dove questo Virtuoso ha dato saggio della perfetta, e commendabile sua perizia in quest' Arte."

¹⁵¹ IBID., p. 528: "Se tanto adunque giova l'Arte della Prospettiva all'buona disposizione degli oggetti, lecito sarammi col Celebre Architetto di felice memoria l'Abbate Tuvara [sic] il dire non potere l'Architetto giungere a segno tale d'intelligenza, che sappia coll' opportuna proporzione, e situazione de' corpi ben disporre le proprie Opere, senza l'ajuto de' Precetti, che di quest' Arte son proprj."

to recede in space, even though the picture itself remains perfectly flat.¹⁵² Vittone echoes the position of Guarini who, while holding that the primary end of architecture is to please and gratify the eye, nevertheless does not advocate perspectival illusionism for its own sake.¹⁵³

... [Guarini] cautioned that architecture should never go to the extremes of perspective illusionism. A delicate balance had to be maintained since perspective was concerned only with delight and disregarded the structural stability and solidity of buildings. Guarini thought that architecture to be truly pleasant must possess a “real symmetry” that did not attempt to fool our sight.¹⁵⁴

The extremes of perspectival illusionism were carried out instead by Guarini's contemporary, Andrea Pozzo, the Jesuit painter and scenographer who fabricated highly illusionistic ceiling frescoes and theater decorations. Pozzo *advocated perspectival illusionism as an end in itself, writing in *Perspectiva pictorum*: “The Art of Perspective does, with wonderful Pleasure, deceive the Eye, the most subtle of all our outward senses.”¹⁵⁵

Vittone's Practice

Vittone's taste for optical illusion manifested itself in practice in his application of perspectival foreshortening to windows, portals, stairwell

¹⁵² VITRUVIUS, *Ten Books*, VI, ii, p. 175.

¹⁵³ On Guarini and perspective, see C. MALTESE, “Guarini e la prospettiva,” in Viale, ed., *Guarino Guarini e l'internazionalità*, I, pp. 557-572.

¹⁵⁴ A. PÉREZ-GOMEZ, *Architecture and the Crisis of Modern Science* (Cambridge, Mass. and London, 1983), p. 91. See GUARINI, *Architettura civile*, Trat. I, cap. 3, oss. 10, pp. 19-20.

¹⁵⁵ POZZO, *Perspectiva pictorum*, I; English ed. consulted, *Perspective in Architecture*, p. 12.

corridors, and even the side chapels of churches. In his designs for perspectival devices Vittone followed the leads of Juvarra and Plantery, each of whom incorporated perspectival windows and portals in his palaces. Juvarra had employed perspectival foreshortening as early as 1716 in his Palazzo Birago di Borgaro in Turin. It occurs twice there, once in the central window on the *piano nobile* of the garden façade (Figure 2.3) and again in the blind portal centered on the terminating wall of the rear courtyard (Figure 2.4).¹⁵⁶ Both window and blind portal face one another on axis across several courtyards arranged to produce an optimum scenographic effect. The perspectival illusion is generated, for both the window and the blind portal, by means of splayed embrasures and a stringcourse bent downward and converging toward the central vertical axis. Years later Juvarra would incorporate similar perspectival windows and portals in the Palazzina at Stupinigi (1729-35), on both the exterior and interior of the building (Figure 2.5).¹⁵⁷

Likewise, Plantery employed a perspectival portal at the Palazzo Cavour in Turin (1729) that, like Juvarra's perspectival windows and portals, features splayed embrasures and a bent-down stringcourse converging toward the central vertical axis.¹⁵⁸ It is prominently centered on the rear wall of the court of honor that opens up on axis to the service court beyond (Figure 2.6). An optimum scenographic effect is achieved in Plantery's arrangement

¹⁵⁶ A. TELLUCCINI, *L'arte dell'architetto Filippo Juvara [sic] in Piemonte* (Turin, 1926), pls. 35, 37.

¹⁵⁷ IBID., pls. 62 (bottom figure), 69 (top figure).

¹⁵⁸ See OLIVERO, *Il Palazzo Cavour*, p. 12, pl. VII; CAVALLARI MURAT, "Gian Giacomo Plantery," p. 331, fig. 19 on p. 323.

of the courts, the perspectival portal, and the narrow axial passageway, one that owes much to the example of the Palazzo Birago di Borgaro.¹⁵⁹

Both Juvarra's Palazzina at Stupinigi and Plantery's Palazzo Cavour were begun in 1729 just three years before Vittone would draw up his prize-winning project for the *Concorso Clementino* competition at the Accademia di San Luca in which, for the first time, he designed perspectival windows (Figure 2.11). Vittone assuredly had Juvarra and Plantery's windows in mind. But he also had recourse to a number of Roman examples, including the perspectival windows on the top loggia of the west façade of the Palazzo Barberini (1628-33) in which the same splayed embrasures and slanted-down stringcourse occur (Figure 2.7).¹⁶⁰ That Vittone was familiar with these windows is certain since he mentions the west façade of the Palazzo Barberini several times in *Istruzioni elementari*, attributing the proportional disposition of the superimposed orders of the façade to Borromini while attributing the

¹⁵⁹ Perspectival windows and portals continued to be built in Piedmont throughout the late eighteenth and nineteenth centuries. For example, Ignazio Amedeo Galletti incorporated perspectival windows on the third storey of his pavilion wings of the Sanctuary at Oropa (1767-70), see BRINCKMANN, *Theatrum Novum*, p. 45, no. 106-B, pl. 106-B; and CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 77, no. 224, and Camillo Boggio added a blind perspectival portal in 1883 to the rear courtyard of the Palazzo Asinari di San Marzano in Turin in direct alignment on axis with Michelangelo Garove's seventeenth-century atrium, see CANAVESIO, *Piemonte barocco*, pp. 151-152, fig. 132. This perspectival motif was also a fixture in the architecture of nearby Lombardy where it appears, for example, in Giovanni Ruggeri's portal of the Palazzo Cusani in Milan (1715), see A.M. MATTEUCCI, *L'architettura del Settecento* (Turin, 1988), p. 260.

¹⁶⁰ According to A. BLUNT, "The Palazzo Barberini: The Contributions of Maderno, Bernini and Pietro da Cortona," *Journal of the Warburg and Courtauld Institutes* XXI (1958), pp. 256-287, here pp. 276-280, the feigned perspective is introduced because it allows the top-floor windows to appear to be the same size as the larger windows below while simultaneously reducing the area to be glazed, a reduction desirable for reasons of economy. The general design for these windows is generally credited to Carlo Maderno, although the execution appears to have been directed by his nephew, Francesco Borromini. Still, Borromini may have contributed something to the windows' design since Maderno's death occurred within a year of the commencement of the palace's construction. On the authorship of the perspectival windows of the Palazzo Barberini, see IBID., pp. 278-279; and P. WADDY, "The Design and Designers of Palazzo Barberini," *Journal of the Society of Architectural Historians* XXXV:3 (October 1976), pp. 151-185, here p. 178.

ornament (by which he means the bees carved on the Doric capitals) to Bernini.¹⁶¹

In addition, there is the foreshortened passageway of Borromini's Palazzo Spada (1652-53), characterized by a sharp diminution in height and width as it extends toward the interior garden beyond (Figure 2.8).¹⁶² It takes its cue from Carlo Maderno's perspectival staircases in both the Palazzo Barberini and the Palazzo Mattei di Giove (1598-1617) in Rome,¹⁶³ as well as several of Giovanni Battista Montano's reconstructions of ancient Roman temples with foreshortened corridors and chambers (Figure 2.9) illustrated in *Scielta di varij tempieetti antichi* (1624) and *Raccolta de tempii, e sepolcri disegnati dall'antico* (1638), later reissued as Books II and III of *Li cinque libri di architettura* (1691).¹⁶⁴

¹⁶¹ VITTONI, *Istruzioni elementari*, p. 390: "Borromino alla facciata del Palazzo Barberini gli ha disposti in proporzione di 22:21:21."; IBID., p. 355: "Soggiungerò solo, che lo stesso Bernino al Palazzo Barberini in Roma in vece delle Rose fece nel collo dei Capitelli Dorici scolpire delle Api, per essere queste lo stemma di quella famiglia."

¹⁶² On Borromini's use of perspective at the Palazzo Spada, see M. JOHANSEN, "La prospettiva d'illusione del Borromini," *Analecta Romana Instituti Danici* 2 (1962), pp. 101-117; L. MORTARI, "Ripristinato l'aspetto originario della 'prospettiva' del Borromini a Palazzo Spada," *Palatino* II (1967), pp. 205-208; L. NEPPI, "Punti di vista sulla prospettiva Spada," *Bollettino d'Arte* XXII (1984), 106-118; R. SINISGALLI and P.G. BADOLONI, *Borromini a quattro dimensioni, L'eresia prospettica di Palazzo Spada* (Rome, 1981); and R. SINISGALLI, *A History of the Perspective Scene from the Renaissance to the Baroque: Borromini in Four Dimensions* (Florence, 2000).

¹⁶³ Maderno's staircase in the Palazzo Mattei di Giove is equipped with splayed jambs, a perspective arch, slanted mouldings, and panel edges all of which combine to produce a perspectival gradation that extends into the deep space of the staircase itself. Such a motif was required to mask the incompatible juncture between the loggia outside the stairwell opening and the stairs within. The main staircase in the Palazzo Barberini, situated in the atrium and vestibule, likewise features a feigned perspectival embrasure that Maderno devised in response to an alteration made to the staircase requiring that the various heights of the adjacent arches be adjusted. See BLUNT, "The Palazzo Barberini, fig. 27-d; H. HIBBARD, *Carlo Maderno and Roman Architecture 1580-1630* (University Park and London, 1971), p. 46, pl. 24-a.

¹⁶⁴ G.B. MONTANO, *Li cinque libri di architettura*, 5 vols. (Rome, 1691), II, pl. 19, III, pls. 3, 11, 19. On Montano's reconstructions of ancient Roman temples, including those featuring a perspectival diminution, see G.B. ZANDER, "Le invenzioni architettoniche di Giovanni

There are also Bernini's perspectival devices, including the perspectival niche framing the monument of Matilda of Canossa in St. Peter's (1637), the perspectival portal to the Ospedale di Santo Spirito (1664-66), and the Scala Regia and *piazza retta* of St. Peter's.¹⁶⁵ Likewise, there are the perspectival devices of Bernini's two students, Carlo Fontana and Giovanni Battista Contini, namely Fontana's perspectival portal to Santa Rita da Cascia (now San Biagio in Campitelli) in Rome (*ca.* 1660-65)¹⁶⁶ and Contini's perspectival window in the church of Sant'Agostino at L'Aquila (1707-17), a window that, in its vertical tapering and trapezoidal shape, recalls the upper windows in Michelangelo's Medici Chapel in San Lorenzo in Florence (1521-34) and Sforza Chapel in Santa Maria Maggiore in Rome (*ca.* 1560).¹⁶⁷

Finally, there is Giovanni Antonio Gherardi's foreshortened choir of the Avila Chapel in Santa Maria in Trastevere in Rome (1678-80; Figure 2.10), itself modeled closely after Borromini's garden passageway at the Palazzo Spada

Battista Montano Milanese (1534-1621)," *Quaderni dell'Istituto di Storia dell'Architettura* no. 30 (1958), pp. 1-21; nos. 49-50 (1962), pp. 1-31, figs. 113, 115-117. See also A. BLUNT, "Baroque Architecture and Classical Antiquity," in R.R. Bolgar, ed., *Classical Influences on European Culture A.D. 1500-1700* (Cambridge, 1976), pp. 349-354.

¹⁶⁵ On Bernini's perspectival motifs and their relation to those of Borromini, see R. SINISGALLI, "Le architetture prospettiche di Bernini e Borromini: confronti e indagini da rilievi," in G. Spagnesi and M. Fagiolo, eds., *Gian Lorenzo Bernini Architetto e l'architettura europa del Sei-Settecento*, 3 vols. (Rome, 1983-84), I, pp. 317-322. See also M. FAGIOLO DELL'ARCO and M. FAGIOLO, *Bernini, una introduzione al gran teatro del barocco* (Rome, 1967), cat. no. 193.

¹⁶⁶ The façade of Fontana's church faced onto a very narrow street and was seen mainly from the side, and thus it was for this reason, to overcome difficult site constraints, that Fontana introduced the perspectival motif, the origins of which have been traced by Hellmut Hager to the upper storey of the Palazzo Barberini and to the perspectival portal of Bernini's Ospedale di Santo Spirito; see H. HAGER, "Le facciate dei SS. Faustino e Giovita e di S. Biagio in Campitelli (S. Rita). A proposito di due opere giovanili di Carlo Fontana," *Commentari XXIII* (1972), pp. 261-271; and IDEM., "Inquiries into Bernini's Legacy," p. 695, fig. 4. Illustrations of Fontana's portal are published in J.L. VARRIANO, *Italian Baroque and Rococo Architecture* (New York and Oxford, 1986), p. 152, fig. 91; and SMITH, *Architectural Diplomacy*, fig. 86.

¹⁶⁷ On Contini's perspectival window at Sant'Agostino, see CURCIO/KIEVEN, eds., *Storia dell'architettura*, I, pp. 295-296.

and several of Montano's reconstructions of ancient temples with perspectival chambers.¹⁶⁸ As the choir recedes from the center of the chapel, its vault and entablature slant sharply downwards, its floor inclines upwards, its walls converge toward the center. The result is a forced perspectival diminution that makes the choir seem deeper than it actually is. The choir is also illuminated by a light chamber from above that enhances the illusionistic effect created by the perspectival diminution. In this it again follows the example of the garden passageway of the Palazzo Spada, which, as originally designed, featured light chambers inserted into the vault.¹⁶⁹ The combined effects of the light chamber and the forced perspective of Gherardi's choir endow the diminutive and cramped interior of the chapel with a sense of spatial expansion and extension.

Vittone himself, drawing upon the innovations of Juvarra and Plantery in his native Piedmont, as well as Borromini, Bernini, Fontana, Contini, and Gherardi in Rome, designed perspectival windows and portals for a number of his own projects. The first such windows appear in his prize-winning competition project for the *Concorso Clementino* of 1732 at the Accademia di San Luca.¹⁷⁰ They are located on the façades of the building blocks facing the central piazza, on the *piano nobile*, delineated with splayed embrasures and

¹⁶⁸ PORTOGHESI, *Roma Barocca*, p. 303, traces Gherardi's use of perspectival diminution to Montano's engravings.

¹⁶⁹ The Borrominesque character of the Avila Chapel was apparently recognized by Gherardi's own contemporaries. Filippo Titi, for example, writing in his guidebook to Rome just a few years after completion of the Avila Chapel, describes it as "...fatta con bizzarra, e capricciosa architettura...", F. TITI, *Studio di pittura, scoltura et architettura nelle chiese di Roma* (Rome, 1674; reprint 1763 ed., *Descrizione delle pitture, sculture e architetture esposte al pubblico in Roma MDCCCLXIII*, Rome, 1978 with Introduction by F. Prinzi), p. 45. See also PICKREL, "L'élan de la musique: Antonio Gherardi's Santa Cecilia Chapel and the Congregazione dei Musici in Rome," *Storia dell'arte* LXI (September-December 1987), pp. 237-254, here p. 240.

¹⁷⁰ OECHSLIN, "Il soggiorno," p. 413, fig. 61; IDEM., *Bildungsgut*, p. 146.

slanted-down stringcourses (Figure 2.11).¹⁷¹ Similar perspectival windows were designed by Vittone as part of his unexecuted project for a palace staircase recorded on a sheet in his unpublished treatise, “L’architetto civile,” conserved today in the Biblioteca Reale in Turin (Figure 2.12).¹⁷² Neither his academic nor his staircase projects were built, however. Only in the Collegio delle Provincie in Turin (begun 1737), on the *piano nobile* overlooking the courtyard, was Vittone able for the first time to oversee construction of the perspectival window (Figure 2.13).¹⁷³ Vittone also introduced a blind perspectival portal in the same building, on the ground floor at the termination of an axial scenographic sequence of a narrow stairway and a wide atrium.¹⁷⁴ It is an arrangement that recalls Juvarra’s blind perspectival

¹⁷¹ The west façade of the Palazzo Barberini had been the drawing exercise for the Third Class competition in architecture of the *Concorso Clementino* of 1707, and these drawings, in which the perspectival windows are prominently displayed, were available in the archive of the Accademia di San Luca for Vittone to consult. The west façade of the Palazzo Barberini, together with a detail of one of the perspectival windows, is also illustrated in Domenico De Rossi’s *Studio d’architettura civile*, a copy of which Vittone owned. On the illustrations of the west façade of the Palazzo Barberini in both the *Concorso Clementino* competition of 1707 and De Rossi’s treatise, see G. DELFINI, “La connotazione di una Accademia attraverso i suoi giudizi: rappresentazioni di Palazzo Barberini in un Concorso Clementino,” in *Studi in onore di Giulio Carlo Argan*, 3 vols. (Rome, 1985), II, pp. 99-110.

¹⁷² On Vittone’s palace staircase design, illustrated on sheet 99 of “L’architetto civile,” see CARBONERI, “Appunti,” p. 64, fig. 14; CARBONERI/VIALE, eds., *Bernardo Vittone architetto*, p. 34, no. 76, fig. 139. This sheet was not published in *Istruzioni diverse*, but was replaced by Vittone’s design for an *apparato* for the *Quarant’ore* devotion. For a discussion of Vittone’s “L’architetto civile,” see CARBONERI, “Appunti,” pp. 59-74; and CARBONERI/VIALE, eds., *Bernardo Vittone architetto*, pp. 40-41, no. 111. On Vittone’s staircase designs in general, as illustrated in *Istruzioni elementari* and *Istruzioni diverse*, see W. OECHSLIN, “Von der Treppe zum Treppenhaus: der Aufstieg eines architektonischen Typus = From Stairs to Stairwell: The Rise of an Architectonic Type,” *Daidalos* 9 (September 1983), pp. 42-52.

¹⁷³ For a discussion of the perspectival windows and courtyard of the Collegio delle Provincie and their relation to Vittone’s 1732 *Concorso Clementino* designs, see PORTOGHESI, *Bernardo Vittone*, p. 166, pls. 198, 200; OECHSLIN, “Il soggiorno,” p. 413, figs. 60-61; IDEM., *Bildungsgut*, p. 146; BRUGNELLI BIRAGHI/DEL BOCCO, *Un palazzo vittoniano*, pp. 54-58; and STARGARD, “Repression,” p. 221, note 25.

¹⁷⁴ PORTOGHESI, *Bernardo Vittone*, pl. 54.

portal in the Palazzo Birago di Borgaro itself terminating on an axial scenographic sequence of wide and narrow spaces.

Vittone also designed an unexecuted project for a double staircase with foreshortened walls that he illustrates in *Istruzioni diverse* (Figure 2.14).¹⁷⁵ It diminishes, if only slightly, in both height and width as it ascends, recalling a number of precedents, including Maderno's perspectival staircases in the Palazzo Barberini and the Palazzo Mattei di Giove, and Borromini's perspectival corridor at the Palazzo Spada. The more immediate source of inspiration, however, is Bernini's Scala Regia, suggested by the colonnade and its slight detachment from the wall. The measure of Vittone's esteem for the Scala Regia is indicated by his reference to the structure in both *Istruzioni elementari* and *Istruzioni diverse*.¹⁷⁶ In the latter treatise he describes at length how the light and perspectival gradation employed in the Scala Regia work to achieve a striking scenographic result, the same result he attempts to achieve in his double staircase project.¹⁷⁷

Finally, as mentioned above, Vittone made use of the forced perspective in two of his centrally planned churches: the Sanctuary of the

¹⁷⁵ VITTONI, *Istruzioni diverse*, pl. 15. On Vittone's staircase, see PORTOGHESI, *Bernardo Vittone*, pp. 168-170, fig. LXIV.

¹⁷⁶ VITTONI, *Istruzioni elementari*, p. 455, pl. 78, no. 15; IDEM., *Istruzioni diverse*, pp. 153-154, pl. 20.

¹⁷⁷ IBID., pp. 153-154: "Rappresenta la Tav. 20 la magnifica famosa Scala del Palazzo Vaticano [...] Essendosi in questo caso il Cavaliere Bernino [sic], che ne fu l'Architetto, ritrovato nella soggezione di doverne accordare l'ingresso all' ampio Portico, che rigira attorno alla Piazza esistente al davanti della gran Basilica Vaticana [...] nè questa potendo per difetto di competente spazio, che gli veniva verso il termine mancando, in uniforme maniera continuare, al mirabile mezzo appigliossi di disporre il primo ramo con degradazione prospettica [...] Ornando poi di Colonne nella prefata maniera degradate il primo ramo, molti belli vantaggi apportovvi; fra i quali considerabili rendonsi i seguenti; cioè Primo, il restringimento dell' ampiezza della Scala, per disporla all' accordo col secondo ramo, senza tuttavia restringerne lo spazio..." See also CAVALLARI MURAT, "Aggiornamento," pp. 532-533, fig. 56.

Visitazione at Vallinotto and the parish church of Santa Maria dell' Assunta at Grignasco. The Sanctuary at Vallinotto (1738-39), Vittone's first centrally planned church, was begun only five years after he had completed his studies in Rome, and thus was designed while the memory of illusionistic Roman architecture was still fresh in his mind.¹⁷⁸ Indeed, the perspectival side chapels of the Sanctuary at Vallinotto owe much to the example of Gherardi's choir at the Avila Chapel, especially so since, like it, they are combined with light chambers on high to enhance the illusionistic effect.¹⁷⁹ By slanting the entablature of the side chapels downward as it recedes from the church's center, an entablature that the spectator is accustomed to seeing running parallel to the horizontal plane of the floor, Vittone creates a perspectival illusion that increases the apparent depth and height of the church.¹⁸⁰ Vittone had hoped to enhance the illusion by means of frescoes that were to have been painted in perspective on the shells of the dome, but which owing to the haste of construction demanded by the patron were never realized.¹⁸¹

Some 12 years later, in his church of the Assunta at Grignasco (1750-83), Vittone again devised side chapels with bent-down entablatures, this time coupled with angled walls that converge in plan as they recede from the

¹⁷⁸ See PORTOGHESI, *Bernardo Vittone*, pp. 97-98, who traces the sources of the perspective diminution in the chapels of the Visitazione to the splayed embrasures of the Palazzo Barberini, the Palazzo Spada, the Scala Regia, and the Avila Chapel.

¹⁷⁹ PORTOGHESI, *Bernardo Vittone*, p. 103, suggests that the perspectival diminution applied to the Sanctuary at Vallinotto was adumbrated by the trapezoidal vestibules positioned behind the crossing piers of Vittone's project for a parish church "in some very conspicuous place."

¹⁸⁰ See M. PASSANTI, "Per Bernardo Vittone nel bicentenario della morte," *Cronache Economiche* 334 (October 1970), pp. 3-18, here p. 6.

¹⁸¹ VITONE, *Istruzioni diverse*, p. 186: "Era mio pensiero, che l'aspetto di tale pitture fosse in degradazione prospettica, ma la fretta dell' esecuzione bramata dal suddetto Signore non permise, che intieramente riuscisse il desiderato effetto dell' Opera."

church's center (Figures 2.15-2.16).¹⁸² Vittone explains in *Istruzioni diverse* that the mutual inclination of the sides of the side chapels converges onto a spot external to the church, for which reason he deemed it necessary to design the arcades in a similar perspectival gradation, a solution that he judges to be happily successful and satisfactory to the sight of the people who see it.¹⁸³ This coordination of forced perspectives in both interior elevation and plan produces a convincing illusion of spatial extension that is enhanced by the introduction of perspectival windows of a type that, with their vertically tapered jambs, are derived from the trapezoidal windows of Michelangelo's Medici and Sforza Chapels and Contini's Sant'Agostino.

¹⁸² On Vittone's design for the Assunta at Grignasco, see P. PORTOGHESI, "La parrocchiale di Grignasco nell'opera di B.A. Vittone," in *Atti e Memorie del Terzo Congresso Piemontese di Antichità ed Arte* (Turin, 1960), pp. 169-174; P. SITZIA and G. SITZIA, "Vittone a Grignasco: La Chiesa dell'Assunta capolavoro Barocco della seconda metà del XVIII secolo," *Novarien* 12 (1982), pp. 184-204; IDEM., "La parrocchiale di Grignasco: documenti e cronaca del cantiere: I parte, Bernardo Antonio Vittone e la costruzione del Tempio," *Bollettino d'Arte* ser. 6 LXXIV:53 (January-February 1989), pp. 11-66; IDEM., "La parrocchiale di Grignasco: documenti e cronaca del cantiere: II parte, I lavori dopo il Vittone fino all'Ottocento," *Bollettino d'Arte* ser. 6 LXXIV:54 (March-April 1989), pp. 63-136; and IDEM., eds., *Vittone a Grignasco: l'Assunta, una chiesa barocca tra Grignasco Roma e Torino* (Grignasco, 2006).

¹⁸³ VITTORE, *Istruzioni diverse*, p. 178: "Degna è qui a mio parere di ristesso la scambievole inclinazione de' lati delle Cappelle, e la tendenza, che concordemente i medesimi hanno ad un rispettivo lor punto esistente al di fuori di esse; motivo, per cui credei dovere in un colle Arcate l'Ordine pure disporre in degradazione prospettica; cosa, che riuscita mi è assai felicemente, nè senza appagamento nel suo aspetto delle Persone intelligenti, che la videro, seconda mi fu da esse accettato."

CHAPTER THREE

VITTONE'S DESIGNS FOR EPHEMERAL AND SCENOGRAPHIC DECORATION AND THEIR TRANSLATION INTO PERMANENT ARCHITECTURE

Ephemeral Decoration

Background and Precedent

Ephemeral decoration has its origins in Hellenic antiquity as contemporaneous coins and other visual records attest.¹ It was not until the time of the early Renaissance though, when growing numbers of festival and funeral machines or *apparati* were erected throughout Europe, that it evolved into a distinct genre.² The evolution of ephemeral decoration was nurtured by certain favorable conditions — social, political, and religious — whose conflation had produced by the seventeenth and early eighteenth centuries a cultural climate, fostered by the courts of Catholic Europe, which gave rise to the most spectacular and sumptuous display. These conditions were markedly pronounced in Vienna, Venice, Naples, and Paris — but were particularly prevalent in Rome where the most elaborate and grandiose forms of ephemeral decoration were produced.³

¹ See B. CHABROWE, "On the Significance of Temporary Architecture," *The Burlington Magazine* CXVI:856 (July 1974), pp. 385-391, here p. 386, note 1; and J.A. PINTO, "Nicola Michetti and Ephemeral Design in Eighteenth-Century Rome," in H.A. Millon, ed., *Studies in Italian Art and Architecture, 15th through 18th Centuries* (Rome, 1980), pp. 289-322, here p. 303.

² CHABROWE, "On the Significance," p. 386.

³ A. BRAHAM, *Funeral Decorations in Early Eighteenth-Century Rome* (London, 1975), pp. 1-2.

Ephemeral decorations were lavishly promoted by lay and ecclesiastic rulers alike to commemorate important public occasions that took the forms of festivals and funerals. Festivals were joyous occasions celebrating the births, marriages, and coronations of rulers, the successful conclusions of military campaigns and diplomatic alliances, and the beatification and canonization of saints. They were marked by temporary *apparati* — triumphal arches, loggias, triumphal columns, fireworks machines, and wine-fountains — typically situated in open urban spaces as well as on barges floating on rivers or the sea. Funerals were solemn occasions commemorating the passing of dynastic personages, the ascendancy of their successors, and the reaffirmation of the political legitimacy of the ruling house. They were marked by catafalques and funereal hangings typically set within the closed interior spaces of churches.

Ephemeral decorations served important social and political ends. They disseminated propaganda to the illiterate populace and tempered “popular unrest through the lavish display of royal largess and munificence.”⁴ Festival *apparati*, in particular, generated an illusionistic spectacle that effectively entertained and amused the populace all the while it displayed the sovereign’s beneficence. Funeral *apparati* served to reassure the populace in the face of the crisis attending the death of the dynastic ruler, evoking the former glory of the deceased and reinforcing the claim to power, based on divine right, of the successor.⁵ The primary purpose then of festival and funeral decorations alike was to promote the political and dynastic interests of the lay and ecclesiastic rulers who commissioned them.⁶

⁴ PINTO, “Nicola Michetti,” p. 304.

⁵ BRAHAM, *Funeral Decorations*, p. 1; CHABROWE, “On the Significance,” p. 388.

Indeed, temporary structures only flourished as an art form because they served such political ends very well. They also served ends that were religious and psychological, ends more difficult to define, but the main reason they were constructed was that they were among the best propaganda vehicles available.⁷

Permanent structures, on the other hand, owing to the considerable time and expense involved in their construction, were an unwieldy and less responsive means of persuasion since the occasion to be celebrated — be it a birth, a wedding, a coronation, or a funeral — was a fleeting moment which required for its timely representation a transient architecture.⁸ Once the occasion had passed, the decoration no longer served its purpose and was dismantled as quickly as it had been erected. However, while the occasion to be celebrated was fleeting, the broader social, political, and religious order that it validated was understood to be permanent, and for this reason elaborate spectacle and illusion were required to sanction the legitimacy and authority of that order.

Festival and funeral decorations both required for their purpose a comprehensive symbolic and allegorical programme. Fireworks machines, for example, were frequently fabricated to celebrate dynastic marriages and the diplomatic alliances that thereby ensued. For such decorations the subject of *The Palace of Hyman* was frequently adopted as, for example, in Domenico Paradisi's fireworks machine of 1721 and Nicola Salvi's machine of 1728 (Figure 3.1).⁹ Allegorical programmes also served to publicize, and sometimes

⁶ BRAHAM, *Funeral Decorations*, p. 1.

⁷ CHABROWE, "On the Significance," p. 388.

⁸ PINTO, "Nicola Michetti," p. 303.

⁹ See OECHSLIN, *Bildungsgut*, p. 153, note 49 on p. 188, fig. 12; PINTO, "Nicola Michetti," pp. 306-308, figs. 13-14; and IDEM., "Architecture and Urbanism," pp. 146-147.

to mitigate, the harsh consequences of political and diplomatic maneuverings.¹⁰ For example, Nicola Fiore's fireworks machine of 1709 erected in Naples represented *The Battle of Gods and Giants* in which Jupiter, enthroned atop the firmament, was depicted casting down pyrotechnic thunderbolts upon rebellious forces seeking to overthrow him. The political message was clear — any attempt by the Neapolitans to overthrow their Austrian overlords "would be futile and violently suppressed."¹¹

Commissions for ephemeral decoration were welcomed by designers. Cost was seldom a prohibitive factor since the materials to be used — wood, canvas, plaster, and paint — were relatively inexpensive and lent themselves to easy and rapid assembly. These materials also encouraged artistic freedom and innovation. Indeed, the premium placed upon novelty and experimentation by the patrons of ephemeral fabrications stimulated and challenged the designer's inventive capacity and encouraged the creation of ever more delightful and spectacular results. Moreover, since ephemeral fabrications were usually covered with emblems, inscriptions, and figurative and ornamental sculpture, they afforded designers the opportunity to work simultaneously in the media of sculpture and painting as well as architecture. In the words of John Pinto:

The design and execution of illusionistic constructions involved painting as much as it did architecture. Indeed, the greatest ephemeral designs of this kind were almost always the creation of artists gifted in both painting and architecture.¹²

¹⁰ For the symbolic and allegorical programmes of early eighteenth-century fireworks machines in Italy, see IDEM., "Nicola Michetti," pp. 305-313.

¹¹ IBID., p. 305, fig 12.

¹² IBID., p. 292.

Finally, designers were secure in the knowledge that if their results were judged to be poor, then the inevitable disgrace to befall and mar the reputations of both themselves and their patrons would be, like the nature of the ephemeral decoration itself, short-lived since once the commemorative event was over the decoration was quickly dismantled and forgotten. In this way “unknown, often young artists received opportunities without fear that failure on their part would constitute a permanent reproach to their patrons.”¹³ For example, in 1668 Carlo Fontana, at that time a little known draftsman and apprentice to Bernini, secured the commission to design a scenic *apparato* to be fabricated in the garden at the Quattro Fontane for the reception of Flavio Chigi. In short, commissions for temporary decorations offered young architects a chance to master established architectural ideas and to explore new ones, but without the risks and constraints associated with commissions for permanent buildings. Still, the more prestigious commissions for ephemeral decorations were seldom awarded to young designers, but generally went to the most distinguished architects of the period, men thoroughly experienced in the design and erection of permanent structures and men frequently affiliated with the Accademia di San Luca.¹⁴ Six such architects — Bernini, Fontana, Contini, Fischer von Erlach, Juvarra, and Michetti — all of them prominent academicians renowned for their permanent architecture, received some of the most celebrated commissions of their age and produced, accordingly, ephemeral decorations of exceptional force and persuasion. It is a curious but striking fact that architects who

¹³ BRAHAM, *Funeral Decorations*, p. 1.

¹⁴ PINTO, “Nicola Michetti,” p. 289.

designed in an unorthodox, bizarre, and capricious manner and who had no ties to the Academy, architects such as Borromini and Guarini, in particular, commanded few commissions for ephemeral decorations. Instead, it was the more orthodox and conventional architects, the ones who enjoyed especially close ties to the Academy, who dominated the production of ephemeral decorations in seventeenth and eighteenth-century Rome.

The correlation between the academic ambient and the production of ephemeral decoration owed much to the decisive impact of Bernini, an academician whose grandiose designs for ephemeral decorations influenced subsequent generations of designers,¹⁵ including his student and assistant, Carlo Fontana, who for the Holy Year of 1675 was commissioned by the confraternity of Santissimo Crocifisso to design festival decorations for the Maundy Thursday procession.¹⁶ Fontana designed a number of other festival decorations, including temporary triumphal arches for the accessions of Popes Innocent XII (1691-1700) and Clement XI (1700-21) and a naval decoration representing Noah's Ark for Innocent XII (1699).¹⁷ Many of Fontana's own students were commissioned to design festival decorations. Fischer von Erlach designed two temporary triumphal arches in 1690 to commemorate the

¹⁵ On Bernini's ephemeral decorations, see L. ZANGHERI, "Alcune precisazioni sugli apparati effimeri di Bernini," in M. Fagiolo and M.L. Madonna, eds., *Barocco romano e barocco italiano: Il teatro, l'effimero, l'allegoria* (Rome, 1985), pp. 109-116; E. POVOLEDO, "Gian Lorenzo Bernini, l'elefante e i fuochi artificiali," *Rivista Italiana di Musicologia* X (1975), pp. 498-516; and K. NOEHLES, "Apparati berniniani per canonizzazioni," in Fagiolo and Madonna, eds., *Barocco romano e barocco italiano*, pp. 100-108.

¹⁶ WISCH, "The Colosseum," p. 99.

¹⁷ See E. COUDENHOVE-ERTHAL, *Carlo Fontana und die Architektur des römischen Spätbarocks* (Vienna, 1930), pls. 34-35; M. FAGIOLO DELL'ARCO and S. CARANDINI, *L'Effimero barocco, Strutture della festa nella Roma del '600* (Rome, 1978), fig. 230; and PINTO, "Architecture and Urbanism," pp. 127-128. On Fontana's ephemeral decoration, see also P. RUSCHI, "Due «inventioni» di Carlo Fontana per una festa in Casa Fürstenberg," *Bollettino d'Arte* LXV (1980), pp. 75-80.

entry of the Imperial Habsburgs into Vienna, both notable for their lavishly decorated sculpture the likes of which had not been seen there before then.¹⁸ Likewise, Juvarra, twelve years later, designed a temporary triumphal arch to commemorate the entry of the French king, Philip V Bourbon, into Messina.¹⁹ Nicola Michetti, another one of Fontana's students and member of the Accademia di San Luca, also designed a number of festival decorations which reveal the influence not only of his teacher but also his colleague and friend, Juvarra.²⁰ Michetti's most celebrated decorations were the fireworks machines he designed for the Colonna family during the early 1730s for the *Festa della China* in Rome. The *China* was an annual festival in Rome sponsored by the King of Naples who, on that occasion, made a gift of a white horse (called *china* in the Neapolitan dialect) to the Pope as a sign of political obeisance.²¹ This festival was accompanied by the presentation of fireworks in the Piazza Santi Apostoli, and every year on this occasion two fireworks machines were produced. During the period between 1731 and 1733, years precisely coeval with Vittone's enrollment in the Accademia di San Luca, Michetti designed

¹⁸ H. AURENHAMMER, *J.B. Fischer von Erlach* (London, 1973), figs. 7-8.

¹⁹ S. BOSCARINO, *Juvarra architetto* (Rome, 1973), figs. 44-48. See also M. VIALE FERRERO, *Filippo Juvarra scenografo e architetto teatrale* (New York, 1970), pl. 1; and PINTO, "Nicola Michetti," p. 290, note 4. By coincidence, Juvarra would end his architectural career designing a royal palace in Madrid for the same patron, Philip V, for whom he had designed his very first monument, the temporary triumphal arch in Messina.

²⁰ Engraved prints of Fischer von Erlach's temporary triumphal arches found their way to Rome where they were studied by Michetti and other young architects (IBID., p. 290, note 3).

²¹ On the *Festa della China*, see G. FERRARI, *Bellezze architettoniche per le feste della China in Roma nei secoli XVII e XVIII* (Turin, 1920); M. RAK, "A dismisura d'uomo. Feste e spettacolo del barocco napoletano," in M. Fagiolo, eds., *Gian Lorenzo Bernini e le arti visive* (Florence, 1987), pp. 259-363; M. GORI SASSOLI, *Della "China" e di altre "Macchine di Gioia," Apparati architettonici per fuochi d'artificio a Roma nel Settecento* (Milan, 1994); and J.E. MOORE, "Prints, Salami and Cheese: Savoring the Roman Festival of the China," *The Art Bulletin* LXXVII:4 (December 1995), pp. 584-608.

and oversaw the fabrication of a total of six machines, two for each year, notable for their airy, open, and illusionistic qualities.²² Michetti's fireworks machines for the *Festa della Chinea* were accoutered with mythological allegories to extol the dignity and glory of the Austrian Habsburgs who ruled Naples at that time.²³

Bernini, Fontana, and their circle of followers, especially those affiliated with the Academy, also designed funeral decorations. For example, Sebastiano Cipriani, one of Fontana's close associates, designed a catafalque for King James II Stuart of England in San Lorenzo in Lucina (1702).²⁴ Fontana himself designed two especially sumptuous catafalques notable for their light and open character. The first was for the funeral service held in 1705 for the Holy Roman Emperor, the Habsburg, Leopold I of Austria, in Santa Maria dell' Anima, the German national church in Rome (Figure 3.2).²⁵ The second was for the funeral service held in 1707 for King Pedro II of Portugal in Sant' Antonio dei Portoghesi, the Portuguese national church in Rome (Figure 3.3).²⁶ Both of Fontana's catafalques, like Cipriani's catafalque for James II,

²² PINTO, "Nicola Michetti," pp. 308-313, figs. 15-20; RAK, "A dismisura," pp. 358-361.

²³ Michetti's two machines of 1732, for example, featured allegorical representations of mythological figures to extol the reign of the Emperor and to celebrate his efforts to maintain peace throughout Europe, with the first machine representing the *Council of the Gods on Olympus* and the second the *Rape of Ganymede*.

²⁴ See C.C. KELLY, "Ars moriendi in Eighteenth-Century Rome: Papal and Princely Catafalques: The Contribution of Paolo Posi," in B. Wisch and S.S. Munshower, eds., "All the world's a stage ..." *Art and Pageantry in the Renaissance and Baroque*, Papers in Art History from The Pennsylvania State University, Vol. VI, Part 2, *Theatrical Spectacle and Spectacular Theatre* (University Park, 1990), pp. 580-620, here p. 613, fig. 15-13.

²⁵ Visual records of this decoration survive on seven pages of an album in the Victoria and Albert Museum; see BRAHAM/HAGER, *Carlo Fontana*, pp. 89-97, nos. 180-231, figs. 150-189.

²⁶ See IBID., pp. 98-103, nos. 241-284, figs. 199-223; and BRAHAM, *Funeral Decorations*, p. 23, pl. 23. It is not surprising that Fontana, a protege of the Viennese Habsburgs, should have designed the catafalque of Pedro II since Portugal was at that very time joined in alliance with

were openwork fabrications inspired largely by Bernini's Baldacchino in St. Peter's.²⁷ Indeed, Fontana was able in many instances to approach closer to the mind of Bernini in his temporary decorations than in his buildings, and in such manner add "to the potential repertory of his former teacher."²⁸

Fontana's catafalque for Leopold I featured four spiral columns at the corners similar in conception to the Salomonic columns of Bernini's Baldacchino.

Fontana's catafalque for King Pedro II of Portugal likewise recalled the Baldacchino. It was circular in plan with four pedestals interrupting the circular base and supporting a circular sepulchral urn. The urn was lifted above the platform, upon which the crown and regalia were laid out, framing an open view to the high altar beyond, much in the way that, in the basilica of

Austria against Bourbon Spain and France during the War of the Spanish Succession (1701-13). Fontana was not the only Roman architect of his generation to have been patronized by the Habsburgs and their allies. Pozzo ended his career in Vienna where he produced *quadratura* and funeral decorations for the Habsburgs, including his own design for a catafalque for Leopold I which owed much to Fontana's example (H. HAGER, "Andrea Pozzo e Carlo Fontana, tangenze e affinità," in Battisti, ed., *Andrea Pozzo*, pp. 234-25). Several of Fontana's students were also patronized by the Habsburgs. Fischer von Erlach, like Pozzo, settled in Vienna where he designed festival and funeral decorations as well as the Karlskirche for the Habsburgs. Michetti also designed temporary decorations on behalf of the Habsburgs, not of the Viennese branch but of the Neapolitan one, who, as overlords of Naples, sponsored the *Chinea* festival in Rome until they were ousted from there after the War of the Polish Succession (1733-36), a turn of events that resulted in Michetti's loss of that commission. In stark contrast, Juvarra frequently worked for the Spanish and French Bourbons, perennial enemies of the Habsburgs. Juvarra in fact ended his career in Madrid (where he died on 31 January 1736) on loan from the King of Savoy to King Philip V Bourbon, perhaps sent there as a result of the diplomatic maneuverings that had cemented the alliance between the Savoyan king and the Bourbons against the Habsburgs during the same War of the Polish Succession. Ironically, it was under this very same Philip V that Juvarra had launched his architectural career, on the occasion in 1702 of the king's entry into Messina for which Juvarra designed a temporary triumphal arch to commemorate the event. Juvarra was also patronized by the French Bourbons, having received commissions from King Louis XIV to design a triumphal arch and oval piazza in addition to a theater for the Soissons Palace. In 1711 Juvarra designed a catafalque for the funeral of the Dauphin in San Luigi dei Francesi, and in 1715 an elaborate project for a mausoleum for Louis XIV.

²⁷ Fontana also drew upon other illusionistic works by Bernini, notably Bernini's catafalque for the Duc de Beaufort and the *Cathedra Petri*; see IBID., p. 24. On Fontana's relation to Bernini, see H. HAGER, "Carlo Fontana: Pupil, Partner, Principal, Preceptor," *Studies in the History of Art* XXXVIII (1993), pp. 122-155; and BRAHAM, "Architectural Legacy," pp. 448-467.

²⁸ IDEM., *Funeral Decorations*, p. 24.

St. Peter's, the Baldacchino frames an open view to the *Cathedra Petri* beyond. Fontana was able to separate the baldachin from the urn below by means of hidden supports. He concealed the supporting beams behind draperies and in this way he made the baldachin, which he modeled as a huge crown, appear as though it were miraculously suspended.²⁹ This motif of the suspended crown, closely associated with the idea of apotheosis, was not a new one. It had long been a staple of funeral decorations — in 1666, for example, Elpidio Benedetti, who was himself closely associated with Bernini's workshop, included one in his design for a catafalque for the Queen of France, Anne of Austria.³⁰ But in the hands of Fontana it became distinguished by the especially striking nature of its illusion.

Fontana's catafalques for Leopold I and Pedro II both incorporated symbolic and allegorical themes celebrating the virtues of the deceased rulers. The theme of Fontana's catafalque for Leopold I was the emperor's *Virtù intrinseca*, proudly displayed in the numerous roundels covering the decoration.³¹ The theme of his catafalque for Pedro II was the king's piety.³²

²⁹ IBID., p. 23, pl. 24.

³⁰ FAGIOLO DELL'ARCO / CARANDINI, *L'Effimero barocco*, fig. 374.

³¹ BRAHAM, *Funeral Decorations*, pp. 10, 12. In one roundel, for example, the figure of Leopold tramples on Deceit and turns away from Adulation. Fontana's catafalque also incorporated many symbols of the ancient Roman Empire such as the four corner posts called *mete* in reference to the turning posts of ancient Roman circuses. The shafts of these *mete* were covered in spiral relief in imitation of the triumphal columns of Trajan and Marcus Aurelius. To each of the four *mete* Fontana assigned a specific allegorical theme — Devotion, Charity, Justice, and the *Ingrandimento dell'Imperio* — illustrated on a roundel.

³² IBID., p. 12. The four pedestals surrounding the circular platform were surmounted by allegorical figures representing Faith, the Catholic Church, Divine Charity, and Human Charity. Sculpted relief illustrating the king's piety decorated the urn itself, which was surmounted by Pedro's portrait enclosed by a frame in the shape of an ourobourus enmeshed in olive branches, an emblem that in this composite form symbolizes Eternity and Peace.

By endowing his funeral decorations with openness, airiness, and the illusion of miraculous suspension, Fontana created marvelous spectacles which left their mark on a number of younger designers, especially his students — Fischer von Erlach, Juvarra, and Michetti — each of whom played a pivotal role in disseminating Fontana's ideas throughout Europe.³³ Juvarra, for example, designed funeral decorations for the French crown.³⁴ In 1711, in collaboration with the French sculptor, Pierre Le Gros, he designed a catafalque for the funeral of the Dauphin in San Luigi dei Francesi,³⁵ and in 1715 he designed an elaborate project for a mausoleum for Louis XIV upon the king's death that year.³⁶ Fischer von Erlach designed funeral decorations for the Habsburgs in Vienna. In 1711, the same year that Juvarra designed his catafalque for the funeral of the Dauphin, Fischer von Erlach designed a catafalque for the funeral of the Habsburg emperor, Josef I, in the Augustinerkirche in Vienna.³⁷ It featured a socle raised on a stepped platform and surrounded by four triumphal columns (comprised, in actuality, of the nave piers of the Gothic church disguised to look like triumphal columns)

³³ Juvarra moved to Turin, Fischer von Erlach settled in Vienna, and Michetti practiced for a brief time in St. Petersburg. James Gibbs, yet another one of Fontana's students, worked in London. See PINTO, "Nicola Michetti," p. 290.

³⁴ On Juvarra's funeral decorations and their iconography, see C. RUGGERO, "Juvarra e l'iconografia funebre," in idem., ed., *La forma del pensiero: Filippo Juvarra*, pp.157-181.

³⁵ ROVERE/VIALE/BRINCKMANN, *Filippo Juvarra*, pp. 53, 132, pl. 126; HAGER, "The Accademia," p. 136, note 81 on p. 141. Juvarra also designed catafalques for Anna Cristina, Principessa of Piedmont; see ROVERE/VIALE/BRINCKMANN, *Filippo Juvarra*, pp. 32, 77, 132, pls. 128-129, and for King Vittorio Amedeo II of Savoye (1732), see IBID., pp. 33, 98, 106, 132, pls. 130-131; and VIALE, ed., *Mostra di Filippo Juvarra*, p. 95, fig. 211.

³⁶ JACOB, *Italienischen Zeichnungen*, pp. 146-147, nos. 753-755, figs. 753-755; HAGER, "The Accademia," p. 136, note 82 on p. 141; IDEM., "Il significato dell'esperienza juvarriana nella "scuola" di Carlo Fontana," in *Studi juvarriani*, pp. 63-98, here p. 72, fig. 3.

³⁷ CHABROWE, "On the Significance," pp. 386-391.

that, with their spiraling relief, were deliberate allusions to the triumphal columns of Trajan and Marcus Aurelius. Draperies were hung from the baldachin, sweeping out into the side aisles where they were tied to suspended obelisks. All these elements — stairs, socle, spiral columns, baldachin, drapery, and suspended obelisks — were formally connected by the interplay of curvilinear and rectangular shapes and by the complex spatial movement of interlocking rhythms. Like the funeral decorations of Fontana, Fischer von Erlach's catafalque for Josef I was laden with symbols and allegories. Its theme was the emperor's apotheosis as *Victor Perpetuus*.³⁸

Vittone's Designs

Vittone himself received commissions for ephemeral decorations from the crown. For example, in 1737 he was called upon to design and erect a

³⁸ IBID., p. 388. The base of the catafalque, symbolizing the earthly sphere, incorporated socles illustrating Josef's Imperial Virtues — Certainty, Liberty, Prudence, Providence, Abundance, Justice, Clemency, and Freedom — the representation of which was closely modeled after ancient Roman coins. The baldachin proper, symbolizing the celestial or spiritual realm, celebrated Josef's Christian Virtues — Faith, Hope, Love, Patience, and Humility. Above this the Habsburg emperor was depicted ascending in a triumphal chariot drawn by two eagles. At the summit allegories of Victory and Courage were depicted presenting a medallion of Josef as *Victor Perpetuus* to the allegory of Glory. Each of the four triumphal columns featured spiral relief representing Habsburg victories over the Bourbons in the War of the Spanish Succession: *The Assertion in Spain*, *The Victory over France*, *The Liberation of Italy*, and *The Restoration of Belgium*. The four suspended obelisks in the side aisles featured allegorical figures representing the fleeting aspects of the corporeal state — Time, Transience, Youth, Glory, War, Happiness, Death, and Love — with each obelisk capped by a phoenix, symbol of rebirth, rising out of the flames. The religious message was clear: the brevity of temporal life is transformed by rebirth into spiritual immortality. The political message was equally clear: the personal life of Emperor Josef I, like that of all individuals, is fleeting, but the Imperial Habsburg dynasty to which he belonged is permanent, reborn in the person of his successor. This idea of the triumphal column, conceived here as a temporary decoration, would be later translated by Fischer von Erlach into permanent stone in the façade of the Karlskirche in Vienna (1715-38); see F.D. FERGUSON, "St. Charles' Church, Vienna: The Iconography of its Architecture," *Journal of the Society of Architectural Historians* XXIX:4 (December 1970), pp. 318-326; and A. SPIRITI, "Da Carlo Borromeo a Carlo VI: iconografia politica nella Karlskirche di Vienna," in D. Zardin and M.L. Frosio, eds., *Cultura e spiritualità borromaica tra Cinque e Seicento*. (Milan-Rome, 2006), pp. 293-316.

temporary festival decoration for the wedding of King Carlo Emanuele III and the Principessa Elisabeth Theresa of Lorraine (Figure 3.16).³⁹ For this occasion the urban squares and buildings of the entire city of Turin — the Via Po, the Piazza Castello, the Piazzetta Reale, the Palazzo Reale, the Palazzo Madama, Santa Cristina and San Carlo in Piazza San Carlo, the Villa della Regina, and the palace and gardens of the Venaria Reale — were decked out in temporary decorations, each one designed by a different Piedmontese architect.⁴⁰ Vittone was commissioned to design the decorations that embellished the Jewish residential block or Ghetto.⁴¹ He outfitted each of the four corners of the block with decorations fabricated to represent one of the city gates to ancient Jerusalem. Two stairways, one each situated to either side of the corner, ascended to a loggia on which a group of musicians was assembled to play musical instruments. Vittone illuminated his decorations with a multitude of candelabras and oil lamps and accoutered them with representations of the royal coat of arms.

Vittone also designed a fireworks machine, associated perhaps with the same commission, that he describes and illustrates in *Istruzioni diverse* (Figure

³⁹ The royal wedding was officially celebrated throughout Piedmont from 21 April to 4 May. On Vittone's festival decoration for the Savoyan royal wedding, see KESSEL, *Festarchitektur*, pp. 152-170, fig. 32, and R. ROCCIA, "Torino nelle vedute incise del primo Settecento," in V. Comoli Mandracci, ed., *Itinerari juvarriani* (Turin, 1995), pp. 90-97, here pp. 93-95.

⁴⁰ The architects included Ignazio Massone, Giuseppe Maria Piovano, Bartolomeo Bernardi, Giovanni Battista Borra, and Ignazio Agliaufi, in addition to Vittone, each of whom was responsible for decorating a different sector of the city.

⁴¹ Vittone's decoration is illustrated in an engraved plate by Gaetano Bianco after a drawing by Giuseppe Maria Piovano, and located in the Biblioteca Reale in Turin (R.53.7). The caption to the plate reads: "Fig. N°. 11.: Veüe d'un des quatre Angles de la Maison des Iuifs Illuminée / Veduta d'uno de quatro Angoli del Ghetto Illuminato. Bernardus Vittonus Architect. Inuentor. / Joseph Maria Piovanus Architect. delin. / Cajetanus Blancus Sculp. 1737." See KESSEL, *Festarchitektur*, p. 160, no. 32; p. 168, fig. 32.

3.17).⁴² He writes that his design gives the reader an idea of the fireworks machines used for demonstrations of a joyous festivity such as a wedding, a coronation, or a feast in honor of some saint that is celebrated with pomp and distinction.⁴³ Vittone explains that fireworks machines, like fountains, should be made in such a fashion that they appear animated and show in their ornaments some fabulous or historical event related to the reasons for which the machine was originally produced.⁴⁴ He proceeds to imagine an occasion of a coronation in Turin of a Savoyan king, for which purpose a fireworks machine is required to represent the happiness that hopefully will accrue under the reign of the new king to the inhabitants of those provinces situated around the Po River.⁴⁵ Vittone tells us that Neptune, the god of the sea and the very personification of the sea into which the Po River flows, can be taken

⁴² VITTONI, *Istruzioni diverse*, pp. 165-166, pl. 36. Vittone's design is undated but the coronation theme suggests that it was drawn up sometime during the mid-1730s when, soon after his return from Rome, Vittone was still seeking and securing royal commissions. According to KESSEL, *Festarchitektur*, pp. 155, 161, no. 36, fig. 36, the decoration formed part of the festival programme of 1737 that accompanied the royal wedding of King Carlo Emanuele III and the Principessa Elisabeth Theresa of Lorraine. On Vittone's design, see also FAGIOLLO, "L'universo," pp. 135-136, fig. 10; and TAVASSI LA GRECA, "«Decorazione»,," p. 181.

⁴³ VITTONI, *Istruzioni diverse*, p. 165: "Per dare allo studioso Leggitore un qualche Esemplio della maniera, in cui disporre si possono le Macchine inservienti per l'apparato de' Fuochi artificiat, che far si sogliono per dimostrazione di festiva allegrezza in occasione di qualche strepitosa solennità, quale per esemplio sarebbe lo Sposalizio, o l'incoronazione d'un Principe, o la Festa, che in onore d'alcun Santo si celebrasse con singolarità di fasto, e distinzione; un' idea ne rapporto nella Tav. 36."

⁴⁴ IBID., p. 165: "Vogliono tali sorta di Fabbriche, o Macchine, siccome già qui avanti si è, delle Fontane trattandosi, accennato, esser nella composizione loro maneggiate in guisa, che si scorga in quello, che alla vista di se presentano, un certo che, per cui animate compajano, e dimostranti sotto le specie de' proprj loro ornamenti un qualche concetto o favoloso, od istorico, che rapporto abbia, od allusione al fatto o sia caso, per cui prodotte rispettivamente vengono tali Macchine."

⁴⁵ IBID., p. 165: "Per venir dunque all' Esemplio, suppongo io qui, che s'abbia ad elevare in Torino una di sì fatte Macchine in occasione della ascesa, che al Trono faccia un Reale della Casa Augustissima di Savoia; e sia il pensiero di rappresentare in essa Macchina la felicità, che sotto gli auspici d'un tale nuovo Regnante sperar ne debbono queste nostre Provincie, che circostando al fiume Pò, riconoscono per Dominanti loro i Reali Sovrani di detta Casa."

to mystically represent the Savoyan provinces since the Po originates in those same provinces and passes through the city of Turin.⁴⁶ Good auspices and congratulations are showered upon the coronation, and a peace, happiness, and prosperity are proclaimed such as the city of Turin and its provinces have never seen since their founding.⁴⁷ Accordingly, the figure personifying the Po River is depicted as seated gloriously upon a throne.⁴⁸

Vittone explains that, according to common opinion, the city was founded by Phaeton, son of Phoebus, who, having obtained from his father permission to drive the Sun's chariot for a day, was unable, owing to inexperience, to master the horses and went too close to the earth and began to scorch it, for which transgression Jupiter struck him with a bolt of lightening and flung him into the Po River.⁴⁹ In his fireworks machine Vittone depicts Phaeton falling out of his chariot while the sun is shining above the summit of Monviso whence the Po originates, a depiction sufficient to convey the idea of the founding of the city of Turin.⁵⁰ On the other side, there is the sea god and

⁴⁶ IBID., p. 165: "Fingo a tal proposito, che Neptune Dio del Mare, e raffigurante il Mare istesso, a cui deporsi va in seno il detto Reale fiume, che l'origine traendo da queste stesse nostre Provincie, e passando sotto la Città di Torino, può misticamente rappresentare le stesse Provincie..."

⁴⁷ IBID., p. 165: "...mandi in segno di godimento, e congratulazione a salutarlo, e ad annunziargli pace, e felicità di giorni; e di giorni i più fausti, e i più giulivi, che visti giammai si siano da che ebbe principio la Città stessa di Torino Metropoli di dette Provincie."

⁴⁸ IBID., p. 165: "Rappresentata pertanto gloriosamente vedesi in Trono la figura esprimente il fiume Pò."

⁴⁹ IBID., pp. 165-166: "E siccome v' ha opinione esser stata la Città di Torino fondata da Faetonte, e di questo fingono i Poeti, che avendo dal Padre Febo ottenuto di guidare per un giorno il carro del Sole, ed ottenutolo, e accintosi all' opera, per inesperienza reggerne non potendo i Cavalli, troppo accostossi alla Terra, la quale di già abbruciandosi, fu egli colpito da Giove con una faetta, onde venne a precipitare nel fiume Pò..."

⁵⁰ IBID., p. 166: "...però con rappresentar lo stesso Faetonte cadente da esso carro, che torcer vedesi coi Cavalli a traverso, apparendo in aria il Sole sovra la sommità del monte Vesulo, da cui scaturire, e discender scorgesi il detto fiume, pare a me sufficientemente espresso il tempo

fortune-teller, Proteus, who, seated in a shell drawn by two sea horses, approaches the spring of the Po and reveals himself clearly to be an envoy to Neptune.⁵¹ Finally, to make the scene more gracious, Vittone includes figures of women dancing around a poplar.⁵² They are nymphs whose abode is the river itself, celebrating not only the advent of better times but also the coming of the marine envoy, and manifesting their cheerfulness to the poplars which the poets identify as the sisters of Phaeton.⁵³

Vittone's project for a fireworks machine, with its comprehensive allegorical programme of mythological figures, recalls earlier fireworks machines produced in Rome such as Nicola Salvi's machine of 1728 representing the *Palace of Hyman* (Figure 3.1), designed just three years prior to Vittone's arrival in Rome, and seemingly known to Vittone since it served as one of the many models for Vittone's 1733 project for a *Temple of Moses* (Figure 1.9).⁵⁴ The significance of Vittone's design lies not only in its formal articulation, in its tendency towards ever lighter and more spectacular illusions, but also in its employment of symbolic and allegorical themes.

della fondazione della detta Città di Torino."

⁵¹ IBID., p. 166: "Proteo per l'altro parte, Dio marino, e Indovinatore, che in una conchiglia sedendo tirata da due Cavalli marini, e strada facendo per il fiume medesimo andar si vede approssimandosi alla di lui origini, assai chiaramente per se dimostra esser lui quel Nuncio, che augure viene da Nettuno inviato a recare ad esso Fiume li suddetti felicissimi augurj."

⁵² IBID., p. 166: "Finalmente quelle Donne, che per maggiormente arricchire, e di sentimento vestire questo pensiero, v' ho lateralmente per l'una e l'altra parte espresso, che giulive stanno insieme unite ballando, a tripudiando attorno ad un Pioppa..."

⁵³ IBID., p. 166: "...sono Ninfe abitanti in detto Fiume, che tutte di gaudio ricolme per la nuova, e singolare felicità de' tempi ad esse non meno, che allo stesso fiume avvegnenti sì per l'ascesa al Trono del suddetto giocondissimo Regnante, che per la fortunevole comparsa dell' Augure marino, vanno in tal guisa festeggiando per le rive del fiume; facendo insieme, che le Sorelle anche di Faetonte, che per le Pioppe ad esso gustino di sì festosa cagione, come presaga di contenti mai più veduti, ed atti a sbandire da esse ogni pensiero, che di duolo possa loro ancora pel sudetto accidente in cuore annidarsi."

⁵⁴ OECHSLIN, "Il soggiorno," p. 408, note 2; IDEM., *Bildungsgut*, pp. 18, 153, fig. 12.

Indeed, Vittone fully appreciated the value of symbolism and allegory, manifest above all in his enthusiasm for symbolic capitals and heraldry.⁵⁵

Vittone in fact is the convinced advocate of the necessity that architecture communicate something to the spectator, beyond the purely hedonistic pleasure tied to its esthetic form. And in particular, to decoration was entrusted such a task...⁵⁶

Vittone also produced designs for funeral decorations, the earliest of which date to his years as a student at the Accademia di San Luca. One such design is for a catafalque for a potentate that he submitted as part of his project for the competition of the *Concorso Clementino* of 1732 (Figure 3.7).⁵⁷ It is a pyramid raised atop a baldachin, a type routinely featured in the architectural reconstructions and caprices by Fischer von Erlach, Juvarra, Giuseppe Galli Bibiena, and others (Figures 3.8-3.10).⁵⁸ Vittone also drew up other designs for pyramids and mausolea that owe a debt to Fischer von Erlach's archeological reconstructions. For example, the pyramid in the foreground to the right of Vittone's illustration of ancient Roman ruins in *Istruzioni elementari* (Figure 3.11) is a precise copy after Fischer von Erlach's

⁵⁵ Vittone writes on both symbolic capitals and heraldry in *Istruzioni elementari*, pp. 354-355, 545-608. On Vittone's symbolic capitals, see also FAGIOLO, "L'universo," pp. 134-135.

⁵⁶ TAVASSI LA GRECA, "«Decorazione»,," p. 180: "Il Vittone difatti è convinto assertore della necessità che l'architettura comunichi allo spettatore qualcosa, al di là del piacere puramente edonistico legato alle sue forme estetiche. E in particolare proprio alla decorazione viene affidato tale compito, quasi a voler imbrigliare entro un binario di razionalità un elemento che per sua natura tenderebbe a sfuggire ad ogni connotazione di logica coerenza."

⁵⁷ Rome, Accademia di San Luca, Arch. St., Cart. Z n. 25. See OECHSLIN, "Il soggiorno," p. 419, fig. 11; IDEM., *Bildungsgut*, p. 141, note 36 on p. 187, fig. 68; and MARCONI/CIPRIANI/VALERIANI, *I disegni*, I, p. 16, no. 384, fig. 384.

⁵⁸ The type appears, for example, in Fischer von Erlach's reconstruction of the Mausoleum at Halicarnassus illustrated in *Historischen Architektur* (I, 6), in a caprice by Juvarra sent from Messina on 6 September 1705 to Lorenzo Ottone (Vienna, Albertina), and in one of Galli Bibiena's scenographic architectural fantasies depicted in *Architetture e prospettive* (II, 7); see OECHSLIN, "Il soggiorno," p. 405, figs. 13, 15; and IDEM., *Bildungsgut*, p. 36, figs. 64, 69-70.

reconstruction of the Pyramid of Sotis at Heliopolis in *Historischen Architektur* (Figure 3.12).⁵⁹ Even the number of steps of the platform is the same in both, the only difference between the two being the capstone of the pyramid which is intact in Fischer von Erlach's version but fractured and truncated in Vittone's. Likewise, Vittone's rendering of a large tumulus in the left background of the same plate in *Istruzioni elementari* (Figure 3.11) is a precise copy after Fischer von Erlach's reconstruction of Hadrian's Mausoleum (Figure 3.13).⁶⁰ The capping of the pillars and obelisks with capitals in Vittone's plate, however, is derived not from an illustration in *Historischen Architektur*, but from one portraying the origin of the orders in Blondel's *Cours d'architecture*.⁶¹ A similar composition, complete with an obelisk, pyramids, and Hadrian's Mausoleum, is to be found in several of Juvarra's architectural fantasies.⁶² Juvarra in fact sketched obelisks, pyramids, and mausolea in numerous architectural fantasies and stage set designs that Vittone assuredly would have seen.⁶³

⁵⁹ VITTONI, *Istruzioni elementari*, pl. 9; FISCHER VON ERLACH, *Historischen Architektur*, I, pl. 14. See OECHSLIN, "Il soggiorno," pp. 406-407, figs. 17, 19; IDEM., *Bildungsgut*, pp. 16, 23, 142, note 43 on p. 188, p. 151, note 24 on p. 192, figs. 2-3; and NEVILLE "The Early Reception," p. 170, note 67 on p. 175, figs. 9-10.

⁶⁰ FISCHER VON ERLACH, *Historischen Architektur*, II, pl. 8. See OECHSLIN, "Il soggiorno," p. 407, figs. 17, 20; and IDEM., *Bildungsgut*, pp. 16, 23, figs. 2, 4.

⁶¹ KRUFT, *History*, fig. 81. See also OECHSLIN, "Il soggiorno," p. 406, note 4, fig. 18; and IDEM., *Bildungsgut*, p. 15, note 10 on p. 40, p. 142, note 42 on pp. 187-188, fig. 1, who, however, misidentifies Blondel's engraving as belonging to another treatise that Vittone owned, Joan BLAEU, *Nouveau théâtre d'Italie, ou description exacte de ses villes, palais, eglises, &c. et les cartes géographiques de toutes ses provinces*, 4 vols. (Amsterdam, 1704). On the listing of Blaeu's treatise in the inventory of Vittone's library (recorded as "Les delices d'Italie, tomi 4"), see PORTOGHESI, *Bernardo Vittone*, p. 249, no. 587.

⁶² New York City, Metropolitan Museum of Art. See ROVERE/VIALE/BRINCKMANN, *Filippo Juvarra*, pl. 235; and MILLON, *Filippo Juvarra. Drawings from the Roman Period*, fig. 23-3.

⁶³ ROVERE/VIALE/BRINCKMANN, *Filippo Juvarra*, pls. 6-9, 20, 235-236, 238.

It was in Cardinal Albani's library, following his victory in the *Concorso Clementino* at the Accademia di San Luca, that Vittone encountered Fontana's catafalque designs for Emperor Leopold I of Austria and King Pedro II of Portugal, of which he made numerous copies conserved today in the Musée des Arts Décoratifs in Paris. In this endeavor Vittone was inspired no doubt by Juvarra who himself earlier had produced copies of Fontana's catafalque designs for Leopold I and Pedro II.⁶⁴ Vittone's method was to lift fragments and details from different drawings by Fontana and recombine them onto a single sheet.⁶⁵ Three sheets of Vittone's Paris sketchbooks, for example, contain copies of details from Fontana's design for the catafalque for Leopold I. The first sheet is a composite study of Fontana's various designs for the bier and incense urns.⁶⁶ The second sheet is a combination of details for a pedestal, a crown, and a death head, taken from separate original drawings by Fontana.⁶⁷ The third sheet also features a combination of various details taken from separate original drawings by Fontana — the *meta* with hanging drapes

⁶⁴ Juvarra's copy of Fontana's catafalque for Leopold I is mistitled "*funerale a Leopoldo II*" and bears little resemblance to Fontana's known drawings. His copy of Fontana's catafalque for Pedro II was taken with him when he left for Turin where presumably it would have been available to Vittone. See VIALE FERRERO, *Filippo Juvarra scenografo*, p. 363, no. 117(2), p. 359, no. 104(2). See also WITTKOWER, *Art and Architecture*, p. 414, who states that Juvarra made his own catafalque designs for Leopold I and Pedro II, but this is erroneous according to BRAHAM/HAGER, *Carlo Fontana*, pp. 99-100.

⁶⁵ Vittone also copied Fontana's tomb of Queen Christina of Sweden erected in St. Peter's, which he illustrates in *Istruzioni diverse*, on the top left corner of plate 107. There is, however, no equivalent copy to be found in Vittone's Paris sketchbook; see WITTKOWER, "Vittone's Drawings," p. 168, note 41-a. On Fontana's original tomb design (Windsor Castle, Royal Library, no. 9905), see BRAHAM/HAGER, *Carlo Fontana*, p. 59, no. 71, fig. 43.

⁶⁶ Paris, Musée des Arts Décoratifs, I, no. 8; Windsor Castle, Royal Library, nos. 9842, 9843, 9846. On Vittone's copies, see WITTKOWER, "Vittone's Drawings," p. 169. On Fontana's original designs, see BRAHAM/HAGER, *Carlo Fontana*, pp. 95-96, nos. 216, 219, figs. 184-185.

⁶⁷ Paris, Musée des Arts Décoratifs, I, no. 89; Windsor Castle, Royal Library, nos. 9840, 9845, 9848 bottom, 9849 bottom, 9850 top, 9851. On Vittone's copies, see WITTKOWER, "Vittone's Drawings," p. 169. On Fontana's original designs, see BRAHAM/HAGER, *Carlo Fontana*, pp. 94-96, nos. 209, 215, 217, 225-227, figs. 179, 183, 188-189.

depicted to the left of the sheet, the hanging drapes themselves, the *meta* depicted at the bottom center, the plan of the catafalque to the right, the putto seated on a curved wall between two incense cannons with his feet resting on a crescent, and the section of one of the incense cannons (Figure 3.4).⁶⁸

Vittone also copied Fontana's designs for the catafalque for King Pedro II of Portugal. Vittone produced seven sheets altogether, all conserved in the Musée des Arts Décoratifs. The first sheet is a copy of Fontana's drawing of the elevation of the catafalque (Figure 3.5).⁶⁹ It is similar to the plate that Vittone eventually published in *Istruzioni diverse* (Figure 3.6).⁷⁰ But whereas the Paris drawing is an orthographic elevation, the plate is a perspectival view closer in its details and architectural setting to another one of Fontana's drawings of the same catafalque. Indeed, it is only in the *Istruzioni diverse* that Vittone's copy of the perspectival version of Fontana's catafalque is to be found. There is no equivalent of it in any of Vittone's Paris drawings.⁷¹ Vittone's second Paris sheet, depicting the personification of Faith and a skeleton atop a pedestal, is a composite collection of four separate studies after Fontana for the pedestal, candleholders, and the scaffolding of King Pedro's

⁶⁸ Paris, Musée des Arts Décoratifs, I, no. 88; Windsor Castle, Royal Library, nos. 9833, 9834, 9836, 9837, 9840, 9854, 9855. On Vittone's copies, see WITTKOWER, "Vittone's Drawings," p. 169, fig. 7. On Fontana's original designs, see BRAHAM/HAGER, *Carlo Fontana*, pp. 94-97, nos. 207-209, 213-214, 220-221, figs. 177-179, 182, 186-187.

⁶⁹ Paris, Musée des Arts Décoratifs, I, no. 114; Windsor Castle, Royal Library, no. 9379. On Vittone's copy, see WITTKOWER, "Vittone's Drawings," p. 169, note 41, fig. 2. On Fontana's original design, see IBID., fig. 1; BRAHAM/HAGER, *Carlo Fontana*, p. 101, no. 258, fig. 208.

⁷⁰ VITTONI, *Istruzioni diverse*, pl. 103 (right figure); Windsor Castle, Royal Library, no. 9380 or 9381. On Vittone's engraving, see WITTKOWER, "Vittone's Drawings," fig. 3. On Fontana's original design, see IBID., fig. 4; BRAHAM/HAGER, *Carlo Fontana*, p. 101, no. 261, fig. 212.

⁷¹ WITTKOWER, "Vittone's Drawings," p. 168. See also (Windsor Castle, Royal Library, nos. 9380, 9381 and 9382); see BRAHAM/HAGER, *Carlo Fontana*, p. 101, nos. 261-263, figs. 211-212.

catafalque.⁷² Three more of Vittone's sheets are copies after Fontana's designs for funeral decorations for the church of Sant'Antonio dei Portoghesi: the main façade,⁷³ the entrance wall of the nave,⁷⁴ and the left wall of the nave.⁷⁵ The sixth sheet is a copy after Fontana's section of the catafalque and baldacchino.⁷⁶ Finally, Vittone's seventh sheet is a copy after Fontana's drawing of a medallion, located to one side of the catafalque, showing a portrait of King Pedro borne by personifications of the Arts and the Sciences.⁷⁷

Vittone also created a number of his own catafalque designs that he illustrates in *Istruzioni diverse*. Plate 103, for example, presents three different schemes for catafalques, all of them funerary *apparati* to be elevated in a church or a similar place of oration, in honor of some famous and distinguished person who has died.⁷⁸ Vittone tells us that while the shapes to

⁷² Paris, Musée des Arts Décoratifs, I, no. 93; Windsor Castle, Royal Library, nos. 9393-9394, 9389, 9403. On Vittone's copies, see WITTKOWER, "Vittone's Drawings," p. 168, note 41, fig. 5. On Fontana's original designs, see BRAHAM/HAGER, *Carlo Fontana*, pp. 100-101, nos. 251-252, 259-260, figs. 203, 209-210.

⁷³ Paris, Musée des Arts Décoratifs, I, no. 109; Windsor Castle, Royal Library, no. 9369. On Vittone's copy, see WITTKOWER, "Vittone's Drawings," p. 168, note 41. On Fontana's original design, see BRAHAM/HAGER, *Carlo Fontana*, p. 103, no. 284, fig. 199.

⁷⁴ Paris, Musée des Arts Décoratifs, I, no. 111; Windsor Castle, Royal Library, no. 9370. On Vittone's copy, see WITTKOWER, "Vittone's Drawings," p. 168, note 41. On Fontana's original design, see BRAHAM/HAGER, *Carlo Fontana*, p. 103, no. 280, fig. 222.

⁷⁵ Paris, Musée des Arts Décoratifs, I, no. 112; Windsor Castle, Royal Library, no. 9376. On Vittone's copy, see WITTKOWER, "Vittone's Drawings," p. 168, note 41. On Fontana's original design, see BRAHAM/HAGER, *Carlo Fontana*, p. 103, no. 278, fig. 221.

⁷⁶ Paris, Musée des Arts Décoratifs, II, no. 181; Windsor Castle, Royal Library, no. 9391. On Vittone's copy, see WITTKOWER, "Vittone's Drawings," p. 168, note 41. On Fontana's original design, see BRAHAM/HAGER, *Carlo Fontana*, p. 100, no. 246, fig. 201.

⁷⁷ Paris, Musée des Arts Décoratifs, I, no. 108; Windsor Castle, Royal Library, no. 9396. On Vittone's copy, see WITTKOWER, "Vittone's Drawings," p. 168, note 41. On Fontana's original design, see BRAHAM/HAGER, *Carlo Fontana*, p. 102, no. 271.

⁷⁸ VITTONI, *Istruzioni diverse*, p. 200: "Rappresenta la Tav. 103. tre diverse idee dimostranti la maniera d'erger Catafalchi. Sono questi, come ognun fa, Apparati funebri, che si elevano in una Chiesa, od altro consimil luogo d'orazione, in onore di qualche ragguardevole

make them are many, the decorations must always make some reference to the death, dignity, and prerogatives of the deceased person, usually by means of skeletons, urns, figures of the virtues, and other symbols.⁷⁹ The first of Vittone's schemes, pictured to the left of the plate, is in the form of an ancient sepulchre, accompanied by pyramids terminating in candelabras (Figure 3.14).⁸⁰ It belongs to a type that Olga Berendsen classifies as an Obelisk-Catafalque,⁸¹ and it recalls Contini's catafalques for Popes Alexander VII and Innocent XII.⁸² Vittone's second scheme, at the center of the plate, is formed by an order of columns decorated with figures of virtues (Figure 3.15).⁸³ It belongs to a type that Berendsen classifies as a Baldacchino-Catafalque,⁸⁴ and its specific form is related to Cipriani's catafalque for James II which, as we have seen, was itself closely modeled after Bernini's Baldacchino.⁸⁵ Vittone's third scheme, to the right of the plate, is the copy he made after Fontana's

Personaggio defunto."

⁷⁹ IBID., p. 200: "Varie sono le fogge, in cui si possono essi formare. Qualunque però sia il modo, in cui si formino, gli ornamenti, che per decorarli vi s'impiegano, vogliono tutta volta esser allusivi alla morte, alla dignità, ed alle prerogative del Defunto. Che però vi si sogliono impiegare scheletri, urne, figure di virtù, e simboli concernenti le dette dignità, e prerogative."

⁸⁰ IBID., p. 200: "La prima delle tre idee, che qui rapportate si sono, è disposta in forma d'un Sepolcro antico, accompagnato da Piramidi terminanti in un Fanale."

⁸¹ O.P. BERENDSEN, "The Italian Sixteenth and Seventeenth Century Catafalque," Ph.D. dissertation, New York University, New York, New York, 1961, p. 56. The basic characteristics of this type of catafalque are the use of tall obelisks and profuse number of candles.

⁸² See KELLY, "Ars moriendi," pp. 601, 603, figs. 15-1, 15-3; and FAGIOLO DELL' ARCO / CARANDINI, *L'Effimero barocco*, fig. 60.

⁸³ VITTONI, *Istruzioni diverse*, p. 200: "La seconda è formata con Ordine di Colonne arricchito di virtù, che l'adornano."

⁸⁴ BERENDSEN, "The Italian Catafalque," p. 73. In this type of catafalque the coffin is placed on a socle below a columnar baldachin.

⁸⁵ KELLY, "Ars moriendi," p. 613, fig. 15-13.

catafalque for Pedro II (Figure 3.06). Vittone describes it as having a centrally placed cinerary urn supported by figures of death and ornamented with figures of virtues and symbols alluding to the deceased Catholic sovereign, the whole terminated by a large crown from which drapery falls in the form of a pavilion.⁸⁶

Vittone's designs for ephemeral decorations date to the 1730s, the decade during which he had ably positioned himself to succeed Juvarra as first architect to the King of Savoy. Royal patronage was crucial for winning commissions for ephemeral decorations, and Vittone succeeded in securing such commissions from the crown. But once royal patronage was lost to Vittone after 1738 he appears no longer to have received such commissions. In any case, there is no evidence that Vittone designed ephemeral decorations after that time. Still, the practice of designing ephemeral decorations would prove a decisive one for Vittone's subsequent designs for permanent architecture.

Scenographic Decoration

Background and Precedent

Scenographic decoration, like ephemeral decoration in general, has its origins in Hellenic antiquity.⁸⁷ Vitruvius mentions theater scenes painted by

⁸⁶ VITONE, *Istruzioni diverse*, pp. 200-201: "Addita la terza un Pensiere, a cui si è dato alquanto più di distesa. Ella è disposta con Urna cineraria nel mezzo, sostenuta da figure di morte, ed ornata di virtù, e di simboli tutti alludenti ad un Sovrano Cattolico, qual supponesi fosse in vita il Defunto, per cui è concepita siffatta idea di Catafalco, che a terminare va in fine in una grande Corona Reale, dalla quale ampie cortine in forma di un Padiglione, discendono, che il complesso di dette figure, virtù, e simboli per l'una a l'altra parte maestosamente accompagnando, nobile a lei danno, e decoroso il compimento."

ancient Greek scenographers who, in order to create the illusion of spatial depth, employed a type of perspective which, while not yet scientific, was based upon the convergence of sight lines toward a central vanishing point:

... Agatharcus, in Athens, when Aeschylus was bringing out a tragedy, painted a scene, and left a commentary about it. This led Democritus and Anaxagorus to write on the same subject, showing how, given a centre in a definite place, the lines should naturally correspond with due regard to the point of sight and the divergence of the visual rays, so by this deception a faithful representation of the appearance of buildings might be given in painted scenery, and so that, though all is drawn on a vertical flat façade, some parts may seem to be withdrawing into the background, and others to be standing out in front.⁸⁸

Thus from a very early moment in its historical development stage set designs were closely linked with the art of perspectival illusion.

By the seventeenth century perspectival illusions were being generated with increasing sophistication by scenographers to produce grandiose and astounding stage sets. Many of the leading designers of Baroque stage sets were Jesuit priests. Jean Dubreuil (1602-70), for example, designed a number of illusionistic stage sets that he illustrates in *La perspective pratique*, published in three volumes in Paris between 1642 and 1649.⁸⁹ Dubreuil's innovations

⁸⁷ The distinction between scenographic and ephemeral decorations is a fine one since both media typically were erected as temporary fabrications put in the service of illusionistic spectacle and constructed out of the same materials — wood, cloth, plaster, and paint. However, ephemeral decorations are generally understood to refer to fireworks machines, triumphal arches, wine fountains, catafalques, and other festival and funeral *apparati*, whereas scenographic decorations are generally understood to refer to actual stage sets erected for the theater. Moreover, ephemeral decorations typically are characterized by three-dimensional fabrications that not only occupy space but at times enclose it, whereas scenographic decorations typically are characterized by a series of flat, two-dimensional painted screens (i.e., wings and backcloth of a stage set) that only simulate the extension and enclosure of space (although this distinction is not always a hard and fast one).

⁸⁸ VITRUVIUS, *Ten Books*, VII, Introduction, p. 198.

⁸⁹ J. DUBREUIL, S.J. *La perspective pratique, nécessaire à tous peintres, graveurs, sculpteurs, architectes, ordevres, brodeurs, tapissiers, et autres se servans du Dessein. Par un Parisien, Religieux de*

included sets with flats, triangular prisms, and rhombic prisms.⁹⁰ Dubreuil's contemporary, Gian Lorenzo Bernini, while not a Jesuit priest himself, was nevertheless greatly affected by Jesuit thought and devotion, and drew heavily upon the Jesuit theater for his own spectacular stage set designs.⁹¹ Bernini's scenographic virtuosity and genius were legendary throughout Europe,⁹² and his influence was most keenly felt in the work of his student, Carlo Fontana (who designed for the Jesuits a Sanctuary and College in Loyola, Spain), and in that of Fontana's contemporary, the brilliant Jesuit scenographer, Andrea Pozzo. In 1668 Fontana had produced a scenic *apparato* in the garden at the Quattro Fontane for the reception of Flavio Chigi.⁹³ This was followed by a number of theater designs, including the Teatro Tor di Nona (1661),⁹⁴ a theater box for Queen Christina of Sweden,⁹⁵ and several

la Compagnie de Jesus, 3 vols. (Paris, 1642-1649). On Dubreuil's perspective and stage sets, see G. SCHÖNE, *Die Entwicklung der Perspektivbühne von Serlio bis Galli-Bibiena* (Leipzig, 1933; Krauss reprint, Nendeln / Liechtenstein, 1977), pp. 52-58; FAGIOLO DELL'ARCO / CARANDINI, *L'Effimero barocco*, p. 392, figs. 510-511; and VAGNETTI, *De naturalis*, pp. 394-396, no. EIIIb32. On the decisive influence that the Jesuits exercised on Baroque stage set designs, see P. BJURSTRÖM, "Baroque Theater and the Jesuits," in R. Wittkower and I.B. Jaffe, eds., *Baroque Art: The Jesuit Contribution* (New York, 1972), pp. 99-110.

⁹⁰ DUBREUIL, *La perspective pratique*, III, pp. 93, 103-104; BJURSTRÖM, "Baroque Theater," figs. 51-a, 51-b, 52-a.

⁹¹ See FAGIOLO DELL'ARCO / CARANDINI, *L'Effimero barocco*, figs. 515-516. Bernini's close ties to the Jesuit Order are confirmed by his membership in the *Congregazione dei Nobili* at the Gesù, and by the commission he received from the Jesuits for Sant'Andrea al Quirinale in Rome. On Bernini's relation to the Jesuits, see H. HIBBARD, *Bernini* (Harmondsworth, 1965), pp. 137, 245, note 227; and BJURSTRÖM, "Baroque Theater," p. 107, note 28.

⁹² On Bernini and the theater, see I.R. LAVIN, *Bernini and the Unity of the Visual Arts*, 2 vols. (New York-London, 1980), I, pp. 146-157; FAGIOLO DELL'ARCO / FAGIOLO, *Bernini*.

⁹³ On Fontana's *apparato*, see HAGER, "Le opere letterarie," pp. 155-160. See also FAGIOLO DELL'ARCO / CARANDINI, *L'Effimero barocco*, figs. 288-293, 454-455.

⁹⁴ B. TAVASSI LA GRECA, "Carlo Fontana e il Teatro di Tor di Nona," in *Il Teatro a Roma nel Settecento*, I, pp. 26-27, fig. 4.

⁹⁵ H. HAGER, "Considerazioni sull'interrelazione fra l'architettura reale e l'architettura posticcia," in *Il Teatro a Roma nel Settecento*, I, p. 85, fig. 9.

other projects.⁹⁶ During the 1690s Fontana rebuilt the Teatro Tor di Nona according to an innovative design notable for its obliquely placed wings, an arrangement resulting in a remarkable perspectival diminution.⁹⁷

Similar oblique wings had been employed earlier by Giulio Troili (1613-85), who describes it in *Paradossi per praticare la prospettiva* (1672).⁹⁸ By the late 1680s they were being used in a number of Venetian theaters.⁹⁹ During this time they were also used by Pozzo in a variety of stage sets with the wings placed either parallel or obliquely to the front of the stage. In one of the most complicated versions of the type, Pozzo equipped the stage with six pairs of obliquely placed wings set in front of two removable backcloths that in turn were placed before four pairs of parallel fixed wings (Figure 3.18). Pozzo did not invent the oblique wing type, but it was he who popularized and disseminated it throughout Europe by means of his travels and his treatise, *Perspectiva pictorum*, published in two volumes in 1693 and 1700.

During the 1690s another scenographic device, a two-point perspectival construction known as the *scena per angolo*, was making its appearance in Bologna, introduced there by Marcantonio Chiarini (1652-1730) in a prison scene for *La Forza della Virtù* of 1694.¹⁰⁰ Soon thereafter Ferdinando Galli Bibiena (1657-1743) designed his first set using this genre. Although it was not

⁹⁶ TAVASSI LA GRECA, "Carlo Fontana," p. 33, fig. 8. On Fontana's theater designs and scenographic decorations, see HAGER, "Considerazioni," pp. 71-118.

⁹⁷ TAVASSI LA GRECA, "Carlo Fontana," pp. 19-34, fig. 7; FAGIOLO DELL'ARCO/CARANDINI, *L'Effimero barocco*, fig. 538.

⁹⁸ D.H. OGDEN, *The Italian Baroque Stage: Documents by Giulio Troili, Andrea Pozzo, Ferdinando Galli-Bibiena, Baldassare Orsini* (Berkeley, 1978), pp. 9-15.

⁹⁹ BJURSTRÖM, "Baroque Theater," p. 103.

¹⁰⁰ WITTKOWER, *Art and Architecture*, p. 574, note 47.

his invention, Galli Bibiena developed and perfected the genre, and by means of widely disseminated publications, most notably *Varie opere di prospettive* (1703-08) and *L'architettura civile* (1711), publicized it throughout Europe during the first decades of the eighteenth century. Ferdinando's son, Giuseppe Galli Bibiena (1696-56), also employed the *scena per angolo* with much success in many designs illustrated in his treatise, *Architetture e prospettive* (1740).

The scenographic innovations of Fontana, Pozzo, and Galli Bibiena were quickly assimilated by Juvarra during the years of his architectural formation. We know from a contemporary and anonymous life of Juvarra, probably written by his older brother Francesco, that while still a youth and before he left Messina in 1704 to enter Fontana's studio in Rome, Juvarra had acquired a copy of Pozzo's treatise that he assiduously studied.¹⁰¹ Soon thereafter Juvarra was introduced to the ideas of Ferdinando Galli Bibiena and as early as 1706, while on a trip to Naples, became one of the first architects to employ the *scena per angolo* in a scenographic caprice entitled "Atrio reale."¹⁰²

Between 1709 and 1712, following his departure from Fontana's studio, Juvarra designed a number of spectacular stage sets for Cardinal Pietro Ottoboni's theater in the Palazzo Cancelleria in Rome.¹⁰³ Cardinal Ottoboni,

¹⁰¹ The anonymous life was first published by A. ROSSI, "Vita del Cavaliere Don Filippo Juvara abbate di Selve e primo architetto di Sua Maestà del Re i Sardegna," *Giornale di erudizione artistica* III (1874), and reprinted in ROVERE/VIALE/BRINCKMANN, *Filippo Juvarra*, pp. 22-29. See also VIALE, ed., *Mostra di Filippo Juvarra*, pp. 22-30.

¹⁰² See ROVERE/VIALE/BRINCKMANN, *Filippo Juvarra*, p. 158; VIALE FERRERO, "Scenografia," in *Mostra del Barocco*, I, p. 22, pl. 12; IDEM., *Filippo Juvarra scenografo*, pp. 12, 123, pl. 5; and POMMER, *Eighteenth-Century*, p. 24, p. 32, note 5.

¹⁰³ On Juvarra's service to Cardinal Ottoboni, see T. MANFREDI, "Nascita di un architetto di corte. L'ingresso di Juvarra al servizio del cardinale Ottoboni," in Ruggero, ed., *La forma del pensiero: Filippo Juvarra*, pp. 71-87.

like Pozzo, was a Jesuit, and his enthusiastic passion for illusionistic spectacle greatly encouraged Juvarra's art. Juvarra's stage set designs certainly owe much to Fontana, but its greatest debt appears to have been to the scenographic decorations of Pozzo and Galli Bibiena. Still, Juvarra's stage set designs for the Teatro Ottoboni are innovative contributions in their own right. Departing from Galli Bibiena's fixed 45-degree angles, Juvarra experimented with a number of unconventional scenes viewed from indeterminate angles.¹⁰⁴ Such designs quickly established Juvarra's "reputation as the foremost scenographer in Europe."¹⁰⁵ Vittone himself was acutely aware of his master's innovation, praising Juvarra as one who, "without the aid of rules proper to the art of perspective, but using only the necessary proportion and disposition of the objects, achieved illusionistic effects."¹⁰⁶ It was during his academic years in Rome that Juvarra also produced a series of innovative scenographic projects for a number of patrons residing throughout the Italian states and other parts of Europe. These included, in addition to the stage sets for Cardinal Ottoboni, theater scenes for Queen Maria Casimira of Poland and Emperor Josef I of Austria, designs for the Teatro Capranica, and a project for a new theater near Piazza Sant'Agostino in Genoa. In all, several hundred scene designs survive among the

¹⁰⁴ See M. VIALE FERRERO, "Scene e scenografi del Settecento," in M. Bernardi, ed., *Tempi e aspetti della scenografia* (Turin, 1954), pp. 74-84, pl. 35; and POMMER, *Eighteenth-Century*, p. 24, note 6 on p. 32.

¹⁰⁵ PINTO, "Nicola Michetti," p. 292, who also writes: "...Juvarra's scenography was more directly concerned with the architectural arrangement of spaces and the intuitive exploration of their potential to generate new and ever more fantastic forms."

¹⁰⁶ VITTONI, *Istruzioni elementari*, p. 528: "Se tanto adunque giova l'Arte della Prospettiva all buona disposizione degli oggetti, lecito sarammi col Celebre Architetto di felice memoria l'Abbate Juvara il dire non potere l'Architetto giungere a segno tale d'intelligenza, che sappia coll' opportuna proporzione, e situazione de' corpi ben disporre le proprie Opere, senza l'ajuto de' Precetti, che di quest' Arte son proprij."

more than one thousand extant drawings produced by Juvarra during his activity in Rome alone.

Nicola Michetti, Juvarra's friend and colleague, entered the employ of Cardinal Ottoboni at the Palazzo Cancellaria during the years between 1709 and 1712 where he perfected his skills as a perspective painter and designer of stage sets. Like Juvarra, Michetti was an academician who had been brought up in Fontana's studio, and again like Juvarra, he incorporated the design principles of Pozzo and the Galli Bibiena in his scenographic art.¹⁰⁷ While at the Palazzo Cancellaria he was able to observe first hand Juvarra's preparations for scenographic productions in the Teatro Ottoboni and apply the lessons learned to his own designs. In the words of John Pinto:

His association with Fontana's studio no doubt first generated Michetti's interest in the design of temporary and illusionistic structures. The most formidable influences on Michetti's ephemeral designs, however, were the treatises of Andrea Pozzo and Ferdinando Galli di Bibiena and the practical experience he gained in observing Juvarra's work for Cardinal Ottoboni's theatre in the Cancellaria between 1709 and 1712.¹⁰⁸

Several decades later, in 1729, Michetti was again retained by Cardinal Ottoboni to design elaborate stage sets for the production of *Carlo Magno* in the Teatro Ottoboni, and the following year he appears to have designed stage sets for the performance there of *Colombo overo l'India Scoperta*.¹⁰⁹ Michetti's innovative and exotic architectural forms that he produced for his stage sets recall the archaeological reconstructions and architectural fantasies created by

¹⁰⁷ PINTO, "Nicola Michetti," pp. 302-303.

¹⁰⁸ IBID., p. 291.

¹⁰⁹ IBID., p. 302.

Fischer von Erlach and Juvarra,¹¹⁰ the same sources that determined also much of the content of Vittone's own academic designs.

It is significant that many of these scenographers — Bernini, Fontana, Juvarra, Michetti, and Galli Bibiena — were academicians, and that it was they who received the majority of commissions for scenographic decorations, and not the architects such as Borromini and Guarini who designed in an unorthodox, bizarre, and capricious manner. It was academicians who commanded the commissions for stage sets, just as it was academicians, as we have already seen, who commanded the commissions for ephemeral decorations in general. Fontana, Juvarra, and Michetti were members of the Accademia di San Luca. So too was Ferdinando Galli Bibiena, elected *accademico di merito* in 1700, and likewise made a member of the Accademia Clementina at Bologna in 1717.¹¹¹ The importance of the academy to Galli Bibiena is reflected in the titles of his treatises, *Direzioni a' giovani studenti nel disegno dell'Architettura Civile, nell'Accademia Clementina dell'Istituto delle Scienze* (Bologna, 1731) and *Direzioni della Prospettiva Teorica corrispondenti a quelle dell'Architettura Istruzione a' giovani studenti di pittura, e architettura nell'Accademia Clementina dell'Istituto delle Scienze* (Bologna, 1732), both of which indicate a strong pedagogical component. The publication of Ferdinando's two treatises took place precisely during the years when Vittone was studying at the Accademia di San Luca, and according to Oechslein, their titles may have inspired the titles of Vittone's own two treatises, *Istruzioni*

¹¹⁰ IBID., p. 302.

¹¹¹ Francesco Galli Bibiena (1659-1739), Ferdinando's brother, was also a member of the Accademia Clementina that in 1710 was united with Accademia di San Luca in Rome. See A.H. MAYOR, *The Bibiena Family* (New York, 1945), p. 29; and HAGER, "Introduction," in *Architectural Fantasy*, p. 6.

elementari per indirizzo dei giovani allo studio dell'architettura civile (1760) and *Istruzioni diverse concernenti l'ufficio dell'Architetto Civile* (1766), both of which suggest an equally strong pedagogical component.¹¹² Moreover, Vittone dedicated neither one his two treatises to a temporal patron, as was customary at the time, but to a sacred one, *Istruzioni elementari* to the Infinite Majesty of God and *Istruzioni diverse* to the Virgin Mary, Mother of God,¹¹³ again under the possible influence of Galli Bibiena who likewise dedicated neither one of his two treatises to a temporal patron, but to a sacred one — *Direzioni a' giovani studenti* to Saint Catherine (patron saint of the Accademia Clementina) and *Direzioni della Prospettiva Teorica* to Saint Petronius (patron saint of the city of Bologna).¹¹⁴

In addition to the profane theater, there was the sacred theater whose origins lay in medieval vigils and passion plays. Some of these vigils, particularly those held between Good Friday and Easter morning, were

¹¹² OECHSLIN, "Vittone e l'architettura," p. 51, note 1. There is no record in the inventory of Vittone's estate to indicate that Vittone's library contained either one of Ferdinando's treatises in question, but it did contain, as noted above, two of Ferdinando's earlier treatises, *Varie opere di prospettiva* (1703-08) and *L'architettura civile* (1711), as well as Giuseppe Galli Bibiena's *Architetture e prospettive* (1740), see PORTOGHESI, *Bernardo Vittone*, p. 250, nos. 613, 635, 643.

¹¹³ VITTONI, *Istruzioni elementari*, Title Page: "...dedicate alla Maestà Infinita di Dio Ottimo Massimo..."; IDEM., *Istruzioni diverse*, Title Page: "...dedicate alle Gran Vergine, e Madre di Dio Maria Santissima..." FAGIOLO, "L'universo," p. 117, interprets the dedications of Vittone's treatises to God and to the Virgin as a sublimation, in a Christian key, of a *topos* that has its origins in Vitruvius's dedication of his treatise to the divine mind and divine genius of Caesar. According to KRUFT, *History*, p. 196, the two dedications manifest evidence of Vittone's naivete, given the increasingly secular age in which his treatises were published. See also WITTKOWER, *Architectural Principles*, p. 149; and CAVALLARI MURAT, "L'architettura sacra," p. 35.

¹¹⁴ F. GALLI BIBIENA, *Direzioni a' giovani studenti nel disegno dell'Architettura Civile, nell'Accademia Clementina dell'Istituto delle Scienze* (Bologna, 1731), Title Page: "...dedicate dall'autore a S. Cattarina de vigri da Bologna Protettrice della suddetta Accademia."; IDEM., *Direzioni della Prospettiva Teorica corrispondenti a quelle dell'Architettura Istruzione a' giovani studenti di pittura, e architettura nell'Accademia Clementina dell'Istituto delle Scienze* (Bologna, 1732), Title Page, "...dedicate dall'autore a S. Petronio Vescovo, e principal Protettore di Bologna."

marked by various liturgical ceremonies that took place in front of a permanent or temporary stage set representing the Holy Sepulchre. From such vigils evolved the devotion of the Forty Sacred Hours (*L'Orazione delle Quarant'ore*), a liturgical service in which the Eucharistic Host is displayed before clergy and laity alike for a period of forty hours. The modern form of the *Quarant'ore* devotion developed during the early decades of the sixteenth century as a perpetual prayer that rotated from church to church.¹¹⁵ By this time its performance was no longer restricted to Holy Week, but was repeated throughout the liturgical calendar to mark such additional holy occasions as Pentecost, the Assumption, the First Sunday of Advent, Christmas, Lent, etc. It was this modern form of the devotion that reached Rome in 1548 when St. Philip Neri initiated it in the church of San Lorenzo in Damaso.

Increasingly, the representation of the Holy Sepulchre, the focal point of the service, came to be replaced by the Eucharistic Host (although occasional depictions of the Sepulchre continued to be fabricated for this purpose well into the eighteenth century). This development was due in large

¹¹⁵ On the sacred theater of the *Quarant'ore* devotion, see G. GNERGHI, *Il teatro gesuitico ne'suoi primordi a Roma* (Rome, 1907), a source I was unable to consult; "Le Quarantore e l'istruzione clementina del 20-1-1705," *La Civiltà Cattolica* II (1919), pp. 111-125; A. DE SANTI, S.J., *L'orazione delle Quarant'ore e i tempi di calamità e di guerra* (Rome, 1919); P. TACCHI VENTURI, S.J., *Storia della Compagnia di Gesù in Italia*, 4 vols. (Rome, 1950), I, pp. 229-248; P. BJURSTRÖM, "The Roman Baroque Stage and Theatrum Sacrum," *Journal of the Society of Architectural Historians* XXVII:3 (October 1968), p. 212; IDEM., "Baroque Theater," pp. 99-110; M.S. WEIL, "The Devotion of the Forty Hours and Roman Baroque Illusions," *Journal of the Warburg and Courtauld Institutes* XXXVII (1974), pp. 218-248; IDEM., "L'orazione delle Quarant'ore come guida allo sviluppo del linguaggio barocco," in M. Fagiolo and M.L. Madonna, eds., *Il barocco romano e l'Europa* (Rome, 1992), pp. 675-693; K. NOEHLES, "Altari scenografici nel Settecento romano," *Bollettino del Centro Internazionale di Studi di Architettura Andrea Palladio* XVII (1975), pp. 161-173; IDEM., "Visualisierte Eucharistietheologie, Ein Beitrag zur Sakralikonologie im Seicento Romano," *Münchener Jahrbuch der bildenden Kunst* XXIX (1978), pp. 92-116; IDEM., "Scenografie per le quarant'ore e altari barocchi," in Schnapper, ed., *La scenografia barocco*, pp. 151-155; IDEM., "Teatri per le Quarant'ore e altari barocchi," in Fagiolo and Madonna, eds., *Barocco romano e barocco italiano*, pp. 88-99; M. FAGIOLO DELL'ARCO, "'Quarant'hore, fochi d'alegrezza, catafalchi, mascherate e cose simile' dall'effimero alla struttura stabile, in Roma barocca," *Ricerche di storia dell'arte* 1-2 (1976), pp. 45-70; S. USSIA, "La festa delle Quarantore nel tardo barocco napoletano," *Rivista di storia e letteratura religiosa* XVIII:2 (1982), pp. 253-265.

measure to the Council of Trent's reaffirmation of the doctrine of the real and permanent presence of God in the Eucharist, and to its desire to make the Sacrament more accessible to the laity. By the beginning of the seventeenth century the public exposition and adoration of the Eucharist had evolved into a large-scale occasion for elaborate spectacle, "a sort of religious theatre employing all the artifice and illusionistic devices of the contemporary stage."¹¹⁶ Unlike the profane theater, however, this religious theater was not a setting for the performance of actors.¹¹⁷ Living players were replaced by illusionistically painted and sculpted figures. Neither members of the clergy nor those of the laity occupied the altar that served as the stage. Instead, they were restricted to the crossing and the nave whence they beheld and venerated the Sacrament.

The transformation of the *Quarant'ore* devotion into a sacred theater was due above all to the zealous efforts of the Jesuits in Rome who promoted the devotion as an alternative to the vanities of carnival.¹¹⁸ Carnival was considered to be a dangerous time of the year which required special expiatory prayers "as an antidote to the worldly excesses practiced in most cities."¹¹⁹ In order to draw people from carnival, however, it was deemed

¹¹⁶ PINTO, "Nicola Michetti," p. 292.

¹¹⁷ BJURSTRÖM, "Baroque Theater," p. 104, erroneously considers the *Quarant'ore* ceremony to have been an actual theatrical production performed by actors. However, there is no documentary evidence to indicate the participation of actors. In fact, while numerous *avvisi* describing *apparati* for the *Quarant'ore* devotion have survived recording payments to painters, sculptors, and architects, as well as payments for materials and lamps, there is no record for any payment to actors or costumes; see WEIL, "Devotion," p. 219, note 1.

¹¹⁸ The Spiritual Exercises of St. Ignatius of Loyola, founder of the Jesuit Order, emphasize the role played by imagination and visualization in the cultivation of piety, an emphasis that explains the Jesuit zeal in transforming the *Quarant'ore* devotion into a spectacular theater. On the Jesuit contribution to the sacred as well as to the profane theater, see BJURSTRÖM, "Baroque Theater," pp. 99-110.

necessary to offer them an extraordinary spectacle. Thus while most of the *Quarant'ore* devotions held throughout the year were rather solemn services, especially those held during Lent, the devotion held during carnival was a splendid celebration which grew in importance until it became one of the most important events of the liturgical calendar. In such a manner, the Jesuits transformed the *Quarant'ore* devotion into the ecclesiastical equivalent of carnival, a "spectacular Biblical pageant in which the church served as both auditorium and scenic setting."¹²⁰

The devotional pageant was accompanied by numerous relics and reliquaries, rich decorations of colorful hangings and silver objects, lights, flowers, elaborate processions, the delivery of special sermons, the singing of special hymns and litanies, and even the occasional attendance of the pope and large numbers of cardinals. During the ceremony the nave of the church remained in semi-darkness while the most important feature of the spectacle, the *apparato*, was bathed in light. At the beginning of the service the curtain covering the set was opened and, in a moment filled with surprise and wonder, the *apparato* was revealed to the spectators.

The *apparato* itself, like the contemporary stage set for the profane theater, was composed of painted wings arranged in perspectival gradation to give the illusion of a much deeper space. This illusion was heightened by the *chiaroscuro* resulting from thousands of candles and oil lamps placed behind the wings in such a manner that both the sources of illumination and the workmen who tended them were hidden from the spectator's view. Each wing was more brightly lighted than the one before it, a calculated

¹¹⁹ WEIL, "Devotion," p. 223.

¹²⁰ BJURSTRÖM, "Baroque Theater," p. 104.

progression from the darkest wing in front of the set to the brightest one in back to produce a convincing illusion of deep space. It was at the deepest and brightest point of the *apparato* that the Sacrament was positioned and exposed within its monstrance, seemingly suspended in air and invariably surrounded by a glory of clouds and angels to produce “a spectacular apparition, an anticipation of Paradise.”¹²¹ The glory was illuminated by hidden lamps and candles in such a manner that the Sacrament appeared to be the very source of illumination for the entire scene.¹²² The church was thereby transformed into a theater, a transformation recorded in contemporary engravings, with one such engraving, for example, depicting the nave of Santa Maria sopra Minerva in Rome outfitted with seating and the side aisles decked with tiers of elevated theater boxes.¹²³

Because *apparati* for the *Quarant'ore* devotion were fabricated out of perishable materials — wood, canvas, plaster, and paint — that were immediately dismantled upon the passage of the forty hours, our knowledge of them is uneven, derived only from contemporaneous literary and pictorial records.¹²⁴ For example, little is known of Bernini's seminal design for the *apparato* erected in the Pauline Chapel of the Vatican Palace on the first Sunday of Advent 1628. No known visual records have come down to us, but

¹²¹ NOEHLES, “Scenografie,” p. 153.

¹²² This illusion, whereby the Sacrament appeared as the sole source of light for the *apparato*, is explained by contemporary descriptions of the *Quarant'ore* devotion in which the Eucharist is referred to as the true sun, and in which the radiant light of the celestial glory is compared to the saving power of Grace which flows from Christ; see WEIL, “Devotion,” p. 240.

¹²³ FAGIOLO DELL'ARCO/CARANDINI, *L'Effimero barocco*, p. 449, fig. 546.

¹²⁴ For example, the *apparati* erected in the Gesù in Rome during the years 1665, 1669, 1671, and 1700 are known only through literary documentation, those during 1685 and 1695 only through pictorial documentation, and those during 1640, 1646, and 1650 through both literary and pictorial documentation. See BJURSTRÖM, “Baroque Theater,” p. 104, note 22.

a written description in an *avviso* survives to inform us that it represented a *Glory of Paradise* in which the Sacrament, brilliantly illuminated by more than two thousand hidden lights, appeared to radiate a tremendous brightness.¹²⁵ Bernini's design proved highly successful and became the basic model for *apparati* erected in Rome during the following fifty years.¹²⁶

The importance of Bernini's contribution can hardly be overstated. Previous *apparati* in Rome had been abstract and decorative or at most architectural settings for the staging of a religious ceremony, Bernini created a tableau illustrating the miraculous quality of the Eucharist. Such tableaux soon became the most important part of the Forty Hours Devotion held during carnival.¹²⁷

In 1631 a similar *apparato*, again representing the *Glory of Paradise*, was erected in San Lorenzo in Damaso. In 1633 yet another *apparato* representing the *Glory of Paradise* was erected in the same church, this one after a design by Pietro da Cortona.¹²⁸ Cortona's *apparato* featured a heavenly glory enframed within a proscenium arch. In the center of the glory, a tabernacle containing the Eucharistic Host was carried by two angels hovering in air and, by means

¹²⁵ WEIL, "Devotion," p. 227, note 28.

¹²⁶ Although no visual records of Bernini's *apparato* have survived, some idea of its appearance may be gleaned from his *Cathedra Petri* in St. Peter's (1656-66), a permanent work in which the celestial glory, however, emanates not from the Eucharistic Host, but from an image of the Holy Spirit painted in the center of the window located directly above the Throne of St. Peter that, together with the surrounding figures of the Four Doctors of the Church, is meant to celebrate and promote papal authority.

¹²⁷ IBID., p. 227.

¹²⁸ On Cortona's *apparato*, see O. POLLAK, *Die Kunsttätigkeit unter Urban VIII*, 2 vols. (Vienna, 1928-31), I, p. 163; BLUNT / COOKE, *Roman Drawings*, p. 77, fig. 58; K. NOEHLES, "Architekturprojekte Cortonas," *Müncher Jahrbuch der bildenden Kunst* XX (1969), pp. 186-190, 200-201; IDEM., "Altari scenografici," pp. 166-166, pl. 86; WEIL, "Devotion," p. 230, pl. 53-a; and J. IMORDE, "Francesco Barberini Vice-Chancellor. The Quarant'ore Decorations in San Lorenzo in Damaso of 1633," in C.L. Frommel and S. Schütze, eds., *Pietro da Cortona. Atti del convegno internazionale Roma-Firenze, 12-15 novembre 1997* (Milan, 1998), pp. 53-61.

of concealed candles and lamps, was made to appear to radiate a brilliant light.¹²⁹ Cortona's *apparato* occupied the choir, separated from the nave by the proscenium arch and perceptible to the worshiper's eye only from a distance. Cortona made the clouds of the glory spill out beyond the proscenium arch into the worshiper's space so as to accomplish the dissolution of the boundary between the choir and the nave.

Visual records also exist for several *apparati* fabricated by Nicolò Menghini for the Gesù in Rome: one for the carnival of 1640 representing *Moses Descending from Mount Sinai*, and another for the carnival of 1646 representing *The Crossing of the Red Sea*.¹³⁰ These *apparati* were huge, the one of 1646 filling the entire presbytery of the Gesù, stretching almost 40 meters high, 20 meters broad, and 15 meters deep, and illuminated by 5000 concealed lights. Menghini, who was a follower of Bernini, closely modeled his *apparati* after Bernini's *apparato* of 1628, but not without significant innovations of his own. To Bernini's basic scheme of the celestial glory of light and clouds radiating from the Eucharistic Host, Menghini added two allegorical scenes below the glory, one from the Old Testament and one from the New. Like Bernini, Menghini was a sculptor by profession who conceived his *apparati* as pictorial tableaux "dominated by figures arranged in a narrative fashion and set in landscapes."¹³¹

¹²⁹ A version of this motif, a monstrance supported by two angels sheltered within a baldachin placed upon the altar, had appeared as early as 1613 in an *apparato* for the *Quarant'ore* devotion erected in the Gesù.

¹³⁰ BJURSTRÖM, "Baroque Theater," pl. 54; WEIL, "Devotion," pls. 52, 53-c.

¹³¹ *IBID.*, p. 235.

Another *apparato* for the Gesù for which we have a visual record is the one designed and erected by Carlo Rainaldi for the carnival of 1650 representing *A Sacrifice in the Temple of Solomon*.¹³² In its recourse to scenic wings, backdrop, and hidden light sources, and in its juxtaposition of Old and New Testament scenes, Rainaldi's design was governed by the same formula established earlier by Menghini. Unlike Menghini's *apparati*, however, Rainaldi's decoration relied upon a forced perspectival diminution of the scenic wings and vault to make the choir appear as deep as the nave. The forced perspective of Rainaldi's *apparato* required for its effective presentation elaborate illumination for which purpose thousands of hidden lights with adjustable flames were employed to flood the *apparati* with a diffuse illumination that cast no shadows. Like Cortona, Rainaldi was an accomplished architect who emphasized the architectural and perspectival arrangement of the *apparato* at the expense of its narrative content. Again like Cortona, he eroded the boundary between the scenic setting and the auditorium of the church, that is to say between the choir and the nave, by minimizing the proscenium frame and by extending the stucco rays of the glory into the spectators' space to create an illusion of spatial continuity.¹³³

It was during the 1640s, the decade when Menghini was erecting his stage sets for the *Quarant'ore* devotion in the Gesù, that the French Jesuit scenographer, Jean Dubreuil, published several volumes of his treatise, *La perspective pratique*, explaining the method by which sacred theaters are to be constructed. This method came to be known as the Jesuit Perspective.

¹³² BJURSTRÖM, "Baroque Theater," pl. 55.

¹³³ BJURSTRÖM, "Baroque Theater," p. 106.

Dubreuil's treatise illustrates how a series of cutouts placed one behind the other could be used as stage sets for altars, oratories, gardens, alcoves, theaters, and ballets. The purpose of the cutouts was twofold: to produce illusionistic effects and to allow the sets to be easily changed in the manner of scenic wings of a stage. In his construction for *A Perspective on an Altar in Place of a Tableau*, Dubreuil envisioned a space about two or three feet deep framed by several pairs of wings and a backdrop.¹³⁴ Dubreuil explains how the cutouts of the scenic altarpiece can be changed to accommodate the different feasts of the liturgical calendar:

At Christmas Eve you could paint a stable on the first cutout; ruins, the Shepherds and the Angel on the second, with a view of Bethlehem at the back. For Easter Sunday the first cutout might show the mouth of a grotto, through which you would see the Sepulchre guarded by soldiers looking up startled at Our Lord above, while through an opening in the grotto you could see Jerusalem and the Marys on the way to the Tomb.¹³⁵

In one scene the focus of the altarpiece is a monstrance displaying the Sacrament surrounded by rays of illumination. In another the focus is the monogram for the Name of Jesus, IHS, painted on the backdrop behind a series of cutouts depicting angels and clouds (Figure 3.19).¹³⁶

In addition, the cutouts of Dubreuil's scenic altarpieces produce an illusionistic effect that is accentuated by means of hidden lights. Dubreuil explains that scenic altars, oratories, theaters, and ballets:

¹³⁴ DUBREUIL, *La perspective pratique*, III, p. 100, detail. See also R. WITTKOWER and I.B. JAFFE, eds., *Baroque Art: The Jesuit Contribution* (New York, 1972), pl. 58-a.

¹³⁵ DUBREUIL, *La perspective pratique*, cited in English translation in MAYOR, *Bibiena Family*, p. 12.

¹³⁶ DUBREUIL, *La perspective pratique*, III, p. 101. See also WITTKOWER/JAFFE, eds., *Baroque Art*, pl. 58-b.

...will be more majestic if they are lighted only by torches, lamps or candles so disposed that the least light falls on the nearest cutout, more and more on the further ones, and most on the background, so as to make the scene look deeper.¹³⁷

This lighting device, as we have seen, was precisely the same one employed by designers of stage sets for the *Quarant'ore* devotion in Rome.¹³⁸ The illusion of depth was achieved not only by *chiaroscuro*, but also by a forced perspective made possible by the narrow chapel and the single level from which Dubreuil's sacred theater was to be viewed.

Dubreuil's ideas were brought to fruition by another Jesuit scenographer, Andrea Pozzo, who was highly skilled in the art of perspectival illusionism. Pozzo lays out in his treatise, *Perspectiva pictorum*, a practical and easy method for constructing perspectives that dispenses with occult lines and other encumbrances.¹³⁹ He publishes a number of designs for *apparati* for the *Quarant'ore* devotion composed of cutouts or ranges of painted cloth that do "wonderfully deceive the Eye, and appear as solid."¹⁴⁰ Pozzo's method for constructing such *apparati* relies upon a single point of sight, a reticulated grid marked with numbers, and the plan and elevation of the imagined figure to be

¹³⁷ Cited in English translation in MAYOR, *Bibienna Family*, p. 12.

¹³⁸ WIEBENSON, ed., *Architectural Theory*, no. III-B-19, observes that, as a youth, "Dubreuil had taken part in performances at the Collegio Romano, and his ideas accurately reflect the practice of the Jesuit school theatre movement which had been so influential at that time."

¹³⁹ On Pozzo's perspective, see M.C. BRADLEY, Jr. "The Perspective of Andrea Pozzo," *Technical Studies in the Field of Fine Arts* VI:8 (1937), pp. 1-16; G. FIOCCO, "La prospettiva di Andrea Pozzo," *Emporium* I:XCIII (1943), pp. 2-9; and VAGNETTI, *De naturalis*, pp. 416-419, no. EIIIB73.

¹⁴⁰ POZZO, *Perspectiva pictorum*, I, fig. 60; English ed. consulted, *Perspective in Architecture*, p. 134. See also V. MARTINELLI, "'Teatri sacri e profani' di Andrea Pozzo nella cultura prospettico-scenografica barocca," in V. De Feo and V. Martinelli, eds., *Andrea Pozzo* (Milan, 1996), pp. 94-113.

constructed.¹⁴¹ Pozzo explains that each cutout, in combination with one or more, is designed separately from the same point of sight and from the same numerated grid or network. Pozzo begins by placing the network on the pavement of a capacious room. He then affixes a point of sight from which a number of visual lines radiate. These visual lines determine the contours of the cutout that are drawn directly onto the network. In this manner the scenographer is able to make a number of cutouts which, when painted, assembled, and precisely distanced from one another, produce the illusion of solid architecture. The single point of sight is of central importance to Pozzo's method, in theological as well as in practical terms,¹⁴² as evidenced by his explicit advice to his readers to begin their work with a resolution to draw all the lines to that one true point of the eye, the glory of God.¹⁴³

Pozzo, who practiced architecture as well as painting, stresses that it is not enough for painters to study drawing, they must also master the delineation of the several orders of architecture.¹⁴⁴ It is not surprising then that Pozzo, even more than Cortona and Rainaldi before him, emphasized the

¹⁴¹ See POZZO, *Perspectiva pictorum*, I, figs. 61-62; English ed. consulted, *Perspective in Architecture*, pp. 136-139.

¹⁴² It is noteworthy that this method for generating stage sets, whereby use is made of both a single point of sight and a reticulated grid, is the same method that Pozzo would use to design illusionistic fresco ceilings; see IDEM., *Perspectiva pictorum*, I, fig. 100; English ed. consulted, *Perspective in Architecture*, pp. 214-215.

¹⁴³ IDEM., *Perspectiva pictorum*, I; English ed. consulted, *Perspective in Architecture*, p. 12: "...my advice is, that you cheerfully begin your Work, with a Resolution to draw all the Points thereof to that true Point, the Glory of GOD..."

¹⁴⁴ IDEM., *Perspectiva pictorum*, I; English ed. consulted, *Perspective in Architecture*, p. 12: "The art of perspective does, with wonderful pleasure, deceive the eye, the most subtle of all our outward senses; and is very necessary to be known of all, who in painting would give a due place and proportion to their figures, and more or less strength requisite to the lights and shades of the picture. This might be insensibly attain'd, if persons, not content with the study of drawing only, would accustom themselves exactly to delineate the several orders of architecture."

architectural and ornamental aspects of the *apparato* to the virtual exclusion of the figural and narrative ones. Already, in Pozzo's *apparato* erected in the Gesù for the *Quarant'ore* devotion of 1685, the narrative scene representing *The Marriage Feast at Cana* has become incidental, completely dwarfed by the vast and grandiose architectural framework surrounding it (Figure 3.20).¹⁴⁵ Indeed, there is little if anything in Pozzo's design to indicate the subject of the *apparato*. And while the *apparato* as built contained a celestial glory of the traditional type, Pozzo's illustration of it in *Perspectiva pictorum* omitted the glory altogether because, as he explains, it obstructed the beauty of the painted architecture that he wished the reader to see.

In 1695 Pozzo designed two *apparati* for the Gesù in which he again emphasized the architectural and ornamental elements to the virtual exclusion of the narrative content.¹⁴⁶ Once again the figural representation was minimized and the narrative scenes, here representing *Sitientes venite ad aquas* and *The Miraculous Cure of the Paralytic* respectively, were hardly identifiable (Figure 3.21). In the illustration of the *apparati* as published in *Perspectiva pictorum*, the celestial glory is again stripped away to better display the beauty of the architectural fabrication.

Pozzo's scenic constructions reflect an entirely novel attitude. They are no longer a subordinate framework for the plot; they are works of festal architecture, brilliant tabernacles visited by Biblical characters.¹⁴⁷

¹⁴⁵ IDEM., *Perspectiva pictorum*, I, fig. 71; English ed. consulted, *Perspective in Architecture*, p. 156. See also WITTKOWER/JAFFE, eds., *Baroque Art*, pl. 59.

¹⁴⁶ POZZO, *Perspectiva pictorum*, II, p. 47. See also OECHSLIN, "Il soggiorno," fig. 58; and WITTKOWER/JAFFE, eds., *Baroque Art*, pl. 61.

¹⁴⁷ BJURSTRÖM, "Baroque Theater," p. 109.

In both designs of 1685 and 1695 Pozzo treated the “artificial” architecture of the *apparati* as extensions of the “real” architecture of the Gesù.¹⁴⁸ This he accomplished by continuing the entablature of the choir and nave into the corresponding part of the *apparato*. Pozzo explains that, if the members of the *apparato* are properly adjusted, and the colors are skillfully applied, the conjunction between the real and painted architecture will be imperceptible.¹⁴⁹ Pozzo’s influence was decisive and continued to exert itself on scenographers and architects alike throughout the early decades of the eighteenth century, including notably Vittone himself.

Vittone’s Designs

Vittone’s interest in scenography first manifested itself during his years of study in Rome where he drew up designs for theaters. These designs have not survived, but in a letter of 7 December 1732, addressed in all probability to the Marchese Ferrero d’Ormea, Vittone wrote that he was enclosing for King Carlo Emanuele III designs he had recently made for theaters drawn in perspective.¹⁵⁰ It was as a student in Rome that Vittone also drew a type of

¹⁴⁸ IBID., pp. 108-109.

¹⁴⁹ POZZO, *Perspectiva pictorum*, I, fig. 30; English ed. consulted, *Perspective in Architecture*, p. 73: “For adjusting the Members so, that the painted Cornice may seem to be the real one continu’d, (which can’t be done by the Perspective Upright) you must transfer the Section A to D; and from the terminating Points of the several Members thereof, draw visual Lines, till they meet those of their respective Members in the Perspective. And if the Colours are laid by a skilful Hand, the Angle at E, tho only painted, will appear as real; and on the contrary, the Angles which the Members of the painted Cornice make with the different Projectures of those of the true, will never be discern’d, unless in the very uppermost Fillet, but the Conjunction of the real with the painted Architecture, will be altogether imperceptible.”

¹⁵⁰ Turin, State Archives, Lettere Particolare, Mazzo 41: “...il novo studio che ho fatto dei teatri a prospetive” and published by POMMER, *Eighteenth-Century*, p. 261, § F, and p. 109, note 17

scenographic caprice, a *capriccio* or architectural fantasy, complete with a *scena per angolo* similar to those commonly sketched by Juvarra and the Galli Bibienas. It was by means of such exercises that Vittone mastered the principles of scenographic and illusionistic design. In one caprice *all'antico*, currently conserved in the Musée des Arts Décoratifs in Paris, Vittone sketched a portico in a *scena per angolo* after an identical structure depicted in Juvarra's scenographic project for *Giunio Bruto overo La Caduta de' Tarquinii* (Figure 3.23-3.24).¹⁵¹ The casual arrangement of ruined architectural fragments in the foreground of Vittone's caprice — stone slabs, capitals, basins, and a broken piece of entablature — recalls the ancient ruins depicted in another drawing by Juvarra (Figure 3.25), as well as in one of Pozzo's plates from *Perspectiva pictorum* (Figure 3.26).¹⁵² In still another caprice, this one of a cemetery scene illustrated in *Istruzioni elementari* (Figure 3.11),¹⁵³ Vittone depicts obelisks, pyramids, and columns similar to the ancient obelisks and urns depicted in several of Juvarra's scenographic caprices (Figure 3.09).¹⁵⁴ Vittone's cemetery scene is also indebted to Fischer von Erlach's reconstruction of the Mausoleum at Halicarnassus in *Historischen Architektur*

on p. 122. See also OECHSLIN, "Il soggiorno," p. 396, note 2; and IDEM., *Bildungsgut*, p. 154, note 39 on p. 193.

¹⁵¹ Paris, Musée des Arts Décoratifs, Dess. orig. 8, II, no. 233. See OECHSLIN, "Il soggiorno," fig. 32. Juvarra's scenographic project is located in the Nationalbibliothek in Vienna (Musikabteilung, inv. nr. 16692, fol. 19) and published by VIALE FERRERO, *Filippo Juvarra scenografo*, p. 41, pl. 67. See also OECHSLIN, "Il soggiorno," p. 428, fig. 33; and IDEM., *Bildungsgut*, p. 143, note 51 on p. 188.

¹⁵² IDEM., "Il soggiorno," p. 409, figs. 34, 36; IDEM., *Bildungsgut*, fig. 48.

¹⁵³ VITTONI, *Istruzioni elementari*, pl. 9.

¹⁵⁴ OECHSLIN, *Bildungsgut*, figs. 64-65.

(Figure 3.08) and to some of Giuseppe Galli Bibiena's scenographic architectural fantasies illustrated in *Architetture e prospettive* (Figure 3.10).¹⁵⁵

It was this combination of archaeological reconstruction and architectural fantasy that contributed much to Vittone's scenographic designs and that ultimately proved instrumental in the formulation of his later architectural innovations.¹⁵⁶ In a sketch rendered in Rome during the early 1730s, for example, presently conserved in the Musée des Arts Décoratifs in Paris, Vittone combined an architectural fantasy with an archeological reconstruction (Figure 1.19).¹⁵⁷ Vittone was so pleased with this sketch that he later used it in a modified form as the model for the frontispiece to *Istruzioni elementari* (Figure 1.17).¹⁵⁸ Again, the architectural arrangement of Vittone's frontispiece depends as much upon the archeological reconstructions of Fischer von Erlach as it does upon the architectural fantasies of the Galli Bibienas (Figure 3.27).¹⁵⁹ In this case, however, the specific source of

¹⁵⁵ FISCHER VON ERLACH, *Historischen Architektur*, I, pl. 6; GALLI BIBIENA, *Architetture e prospettive*, pt. II, pl. 7. See also OECHSLIN, "Il soggiorno," p. 405, fig. 15; and IDEM., *Bildungsgut*, p. 36, figs. 69-70.

¹⁵⁶ PINTO, "Nicola Michetti," p. 297, writes: "...throughout the eighteenth century, from Juvarra to Piranesi, the explorations of the scenographic potential of Roman architecture ran parallel to the systematic study of ancient remains, which provided the necessary foundation in fact for imaginary and visionary architectural compositions."

¹⁵⁷ See W. OECHSLIN, "Il contributo dei Bibiena. Nuove attività architettoniche," *Bollettino del Centro Internazionale di Studi di Architettura Andrea Palladio XVII* (1975), pp. 131-159, here p. 149, note 109 on p. 158, pl. 78 (note that the caption to pl. 78 is erroneously transposed with the caption to pl. 77), who dates Vittone's Paris sketch to 1732-33, a date which accords well with the sketch having served as the direct model for the frontispiece to *Istruzioni elementari* which was engraved in 1738 by Vittone's assistant, Giovanni Antonio Belmondo; see BAUDI DI VESME, *Schede Vesme*, I, p. 113.

¹⁵⁸ VITTORE, *Istruzioni elementari*, Frontispiece, pl. 1. In both the frontispiece to *Istruzioni elementari* and the Paris sketch the Colosseum appears to the right, and the tetrastyle temple portico to the left, of the composition. An obelisk also makes an appearance in both illustrations, to the far left of the frontispiece and in the center of the Paris sketch. See also FAGIOLO, "L'universo," p. 157, fig. 1.

inspiration was Borromini's frontispiece to the first volume of *Opus Architectonicum* (Figure 1.18) which features the same monuments of Roman antiquity — the Colosseum, triumphal column, obelisk, and tetrastyle temple portico — that appear in both Vittone's Paris sketch and frontispiece to *Istruzioni elementari*.¹⁶⁰

Vittone also made use of the two-point perspectival motif, the *scena per angolo*, popularized by the Galli Bibienas, depicted on the upper floor, within the central arch, of one of his unexecuted projects for a stairwell illustrated in *Istruzioni diverse* (Figure 3.28).¹⁶¹ The motif of the *scena per angolo* as an organizing principle also informs Vittone's design for the entrance stairway to

¹⁵⁹ GALLI BIBIENA, *Architetture e prospettive* (I-6; I-10; II-7; III-6; III-10; IV-7; IV-1). Vittone's Paris sketch features an architectural fantasy to the extreme right foreground of the composition that is absent from the frontispiece to *Istruzioni elementari*. It is a fanciful structure that, with its detached columns capped by an exuberant array of finials, has the pronounced character of a scenographic decoration. The alignment of its sight lines towards the center of the sketch, combined with a complementary alignment of sight lines of the temple portico opposite, produces a convergence in one-point perspective very much like that of a stage set. On the affinity between Vittone's Paris sketch and Giuseppe Galli Bibiena's scenographic caprices, see OECHSLIN, "Il contributo dei Bibiena," pp. 148-149.

¹⁶⁰ BORROMINI, *Opus Architectonicum*, Frontispiece. See also OECHSLIN, "Il soggiorno," p. 411; and IDEM., *Bildungsgut*, pp. 32, 144, note 59 on p. 189, figs. 58, 60. Moreover, the tetrastyle temple is domed in Borromini's frontispiece in precisely the same manner as it is in Vittone's Paris sketch. However, in Borromini's frontispiece the positioning of the triumphal column and the obelisk differs from that of Vittone's frontispiece and Paris sketch. Borromini positions the triumphal column to the right of his sheet, in contrast to Vittone who positions it to the left-center of his frontispiece and eliminates it altogether in his Paris sketch. Borromini positions the obelisk at the central background of his frontispiece, again in contrast to Vittone who brings it to the central foreground of his Paris sketch and to the left foreground of his frontispiece, its capstone broken off just as it is in Borromini's frontispiece. Nevertheless, in the central background of Vittone's frontispiece, directly underneath the outstretched hand of the figure of "Architettura," in the corresponding place where, in Borromini's frontispiece, the obelisk appears, Vittone introduces an outcropping of rock tapered in the form of a spire that closely resembles Borromini's obelisk. On the other hand, Borromini's frontispiece features depictions of several structures that do not appear in either Vittone's frontispiece or his Paris sketch, namely the peripteral rotunda in the central background, the triumphal arch in the right mid-ground, and the prominent stele in the foreground.

¹⁶¹ VITTORE, *Istruzioni diverse*, pl. 18. Such depictions, as perspective scenes painted in fresco on the walls of palaces, was an established practice in regions of northern Italy during the eighteenth century, most notably in Bologna, but also in Piedmont where it occurs, for example, in the Palazzo Gozzani di Treville at Casale Monferrato (1711-25). See A.M. MATTEUCCI and A. STRANZANI, eds., *Architettura dell'Inganno: Cortili bibieneschi e fondali dipinti nei palazzi storici bolognesi ed emiliani* (Bologna, 1991), pp. 259-261, 294, pls. 2-4, 37.

the Villa Morra di Lavriano at Villastellone (1733; Figure 3.29) as well as a number of his palace designs with diagonally rotated wings (Figure 3.30).

In addition to having designed a number of scenographic caprices, Vittone penned a lost unpublished treatise entitled “Discourses on Theaters and the Arrangements of the Things Most Necessary to Perform in Them and in the Method of Making Them.”¹⁶² Vittone also wrote an addendum to *Istruzioni diverse* entitled “Theatrical Instructions, or a Brief Discourse on the Form of Modern Theaters.”¹⁶³ In it he specifies that the stage must be open to, and inclined towards the auditorium, with its arrangement regulated by the laws of perspectival diminution (Figure 3.31).¹⁶⁴ Vittone demonstrates by way of illustration how, in the manner of Giulio Troili and Andrea Pozzo, the wings of a stage set are to be arranged according to perspectival diminution (Figure 3.32).¹⁶⁵

Vittone also designed stage sets for the sacred theater. In *Istruzioni diverse*, for example, he presents two projects for an *apparato* for the *Quarant'ore* devotion, the first of which was not executed (Figure 3.33), the second of which was erected on the occasion of Lent 1737 for the Jesuits of Santi Martiri in Turin (Figure 3.34).¹⁶⁶ Vittone writes in his treatise that the observance of

¹⁶² On Vittone's lost treatise, see WITTKOWER, “Vittone's Domes,” p. 213.

¹⁶³ VITTONI, *Istruzioni diverse*, pp. 203-217, pl. 110. See also OLIVERO, *Le opere*, pp. 73-74; and PORTOGHESI, *Bernardo Vittone*, p. 174, fig. XXCI.

¹⁶⁴ VITTONI, *Istruzioni diverse*, pp. 203-204: “Circondano tali scene per ogni parte (salvo quella d'avanti, che restar dee apertamente per dare ad essa vista dall' Uditorio) un piano alquanto inclinato verso l'Uditorio, e regolarmente giusta le regole di Prospettiva degradato.”

¹⁶⁵ *IBID.*, pl. 108, figs. 1-2.

¹⁶⁶ *IBID.*, pp. 196-197, pls. 98-99. On Vittone's executed project, see OLIVERO, *Le opere*, p. 73; PORTOGHESI, *Bernardo Vittone*, p. 16, fig. III; V. MOCCAGATTA, “Bernardo Antonio Vittone. Problemi attributivi e nuovi contributi,” *Palladio* n.s. XIX:1-4 (January-December 1969), pp. 33-128, here p. 33; *IDEM.*, “La chiesa dei Santi Martiri di Torino. Architettura, decorazione,

certain rules and principles necessary to produce elegant and gracious buildings also holds true for those structures destined to serve as thrones to the majesty of God, especially those that are exposed on altars on the occasion of the sacred Forty Hours.¹⁶⁷ The most important rules which the architect must observe are first, that the *apparato* be made in proportion to the dimensions of the church and proportionate in its component parts,¹⁶⁸ second, that the design of the *apparato* accord as much as possible with the style of the church,¹⁶⁹ third, that the ornaments of the *apparato* be lavish and gracious, but at the same time severe and majestic so as to inspire veneration and respect,¹⁷⁰ fourth, that the ornaments themselves include something mystical, portraying

arredo," *Bollettino della Società Piemontese di Archeologia e Belle Arte* n.s. XXV-XXVI (1971-72), pp. 67-108, here p. 107, note 109; IDEM., "La chiesa torinese dei Santi Martiri di Torino. Aggiunte attributive, nuove attribuzioni, precisazioni," *Bollettino della Società Piemontese di Archeologia e Belle Arte* n.s. XXX-XXXI (1976-77), pp. 34-47, here p. 35, note 5; FAGIOLO, "L'universo," p. 136, note 3, fig. 12; CANAVESIO, "Inediti vittoniani," p. 172, note 11; IDEM., "Presenze gesuitiche," p. 269, note 1; IDEM., *Piemonte Barocco*, p. 135; B. SIGNORELLI, "La chiesa dei SS. Martiri e il Collegio vecchio della Compagnia di Gesù a Torino," in L. Patetta and S. Della Torre, eds., *L'architettura della Compagnia di Gesù in Italia, XVI-XVIII secolo* (Genoa, 1992), pp. 253-258, here p. 255, note 48 on p. 256; and IDEM., "Per i Santi Martiri," pp. 152-153.

¹⁶⁷ VITTONI, *Istruzioni diverse*, p. 196: "Da quanto, di sì grande varietà trattando di Fabbriche, si è fin qui andato dicendo ben credo, che possa ora mai esser il Leggitore persuaso non darsi in esse leggiadria plausibile senza l'osservanza di certe massime, o regole, che il buon gusto suole, e la ragione stessa in ogni, e qualunque caso prescrivere. E se Fabbrica non v'ha, qualunque ella sia, in cui non si possa da tali massime, o regole prescindere, senza che ella fuori portisi dei termini d'un onesta aggradevole comparsa; di necessità fra le altre assolutamente sia ciò intendere di quelle, che destinate sono a servire, dirò così, di Trono alla Maestà d'un Dio, che sugli Altari, in occasione massimamente di Sacre Quarant'ore si espone."

¹⁶⁸ IBID., p. 196: "Ora le regole, o massime almeno più importanti, che fra le altre a me pajono doversi dall' Architetto osservare, per ben disporre tali sorta di Macchine, od Ornamenti, a queste, secondo io stimo, riduconsi; cioè primo. Ch' elle si adattino alla grandezza di Vano, e del luogo, ove hanno a collocarsi, così che il grande al grande, il medio al medio, il piccolo al piccolo corrisponda; nè disparità alcuna v'appaja, o dissonanza di proporzione; cosa, che determinata esser vuole dalla perizia, e dal buon discernimento dell' Architetto."

¹⁶⁹ IBID., p. 196: "Secondo. Che per quanto la regolarità, ed il buon' ordine permettono, se ne accordino i lineamenti con quelli del Vaso medesimo, nel quale hanno a prodursi."

¹⁷⁰ IBID., p. 196: "Terzo, che gli ornamenti abbiano della leggiadria, e del fasto; ma siano insieme per la gravità, e decenza loro maestosi, e divoti; sicchè in un col diletto eccitar vagliano ne' Riguardanti e pietà, e venerazione." See also TAVASSI LA GRECA, "«Decorazione»,", p. 181.

concepts, facts, or else stories taken from the Holy Scriptures that allude to the mysteries contained in the Holy Bread,¹⁷¹ and fifth, that everything be set in such a manner that the *apparato* is positioned in the principle part of the church and made visible in its best perspective.¹⁷² In short, Vittone requires that the *apparato* be well fitted, both proportionately and stylistically, to its church surroundings, that it be sufficiently extravagant on the one hand and sufficiently stately on the other, that it contain allegorical references, and that it be prominently placed and clearly visible to the spectator.

The first of Vittone's two designs for an *apparato* for the *Quarant'ore* devotion, the one unexecuted, features an open ciborium with Salomonic columns capped by a crown held aloft by figures of angels (Figure 3.33). The open ciborium closely resembles that of Pozzo's *apparato* of 1695 (Figure 3.21) while the crown recalls those of Fontana's catafalques of the early 1700s (Figures 3.2-3.3). The crown is indicative of both royalty and victory, but it also carries a funereal connotation in keeping with the iconographical programme associated with the cult of the Eucharist. The Eucharistic Host, as illustrated by Vittone, is boldly displayed in its monstrance, radiating light, and surrounded by a glory of clouds and angels. Vittone's illustration thus gives prominence to the celestial glory in a manner that obscures much of the architecture of the *apparato*, in contrast to Pozzo's illustrations of *apparati* in

¹⁷¹ VITTONI, *Istruzioni diverse*, pp. 196-197: "Quarto. Che gli Ornamenti stessi abbiano del mistico, rappresentando concetti, fatti, ovvero istorie, che allusivi siano ai Misterj, che in quel Sacrosanto Pane contengonsi; e siano tali concetti; ovvero fatti dedotti dalle Sacre Carte, come vero, ch' elle sono, e proprio seminario delle figure naturalmente allusive a sì fatti Misterj." See also TAVASSI LA GRECA, "«Decorazione»,", p. 181.

¹⁷² VITTONI, *Istruzioni diverse*, p. 197: "Quinto. Che il tutto in somma disposto, ed aggiustato sia in maniera, e con accordo tale, che standosi nel mezzo della Chiesa, o sia nel punto principale di essa, intiero goder si possa di tali Macchine, e nella più nobile loro apparenza l'aspetto."

Perspectiva pictorum in which the glory is omitted altogether to reveal the architectonic structure in all its clarity. Still, enough of Vittone's *apparato* is visible to determine that it is an open, centrally planned structure indebted as much to the *apparati* of Pozzo as to the funeral decorations of Fontana. The spiral columns and suspended crown are ultimately derived, however, from Bernini's Baldacchino in St. Peter's.

Vittone's second design for an *apparato*, the one erected in Santi Martiri for Lent in 1737, is also distinguished by its open character (Figure 3.34), and by its many obvious elements borrowed from both Pozzo and Fontana's designs for ephemeral and scenographic decorations.¹⁷³ Both the ciborium and the foreground architectural representation are modeled directly after Pozzo's two *apparati* designed for the *Quarant'ore* devotion for the Gesù in 1695, *Sitientes venite ad aquas* and *The Miraculous Cure of the Paralytic*,¹⁷⁴ while the background architectural representation is taken from that of Pozzo's *apparato* for the Gesù of 1685 (Figure 3.20).¹⁷⁵ However, once again Vittone's *apparato* is illustrated in *Istruzioni diverse* with a brilliant glory that conceals much of the architectural representation, in contrast to Pozzo's *apparati* as illustrated in *Perspectiva pictorum* in which the glory is eliminated.

The pronounced allusion to Pozzo in Vittone's *apparato* is not surprising since Vittone designed it in 1737 just four years after he had completed his

¹⁷³ See PORTOGHESI, *Bernardo Vittone*, p. 99, who observes that Vittone relied upon Pozzo's designs for *apparati* almost to the point of plagiarism. On the connections between Vittone and Pozzo's *apparati*, see also CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 12; OECHSLIN, "Il soggiorno," p. 413, note 3, figs. 57-59; and IDEM., *Bildungsgut*, p. 145, note 66 on p. 189.

¹⁷⁴ POZZO, *Perspectiva pictorum*, II, figs. 47-48. See WITTKOWER/JAFFE, eds., *Baroque Art*, pls. 61, 63; and OECHSLIN, "Il soggiorno," p. 413, note 3, figs. 58-59.

¹⁷⁵ POZZO, *Perspectiva pictorum*, I, pl. 79; English ed. consulted, *Perspective in Architecture*, p. 156. See WITTKOWER/JAFFE, eds., *Baroque Art*, pl. 59.

studies at the Accademia di San Luca where, as we have seen, he had assiduously studied and copied Pozzo's designs for scenographic decorations.¹⁷⁶ Later, when Vittone was commissioned to design the Collegio dei Gesuiti adjacent to Santi Martiri (1769), he again looked to Pozzo for inspiration, with circular panels sunk into the corridor ceiling (Figure 3.49) in the manner of the circular perforations that Pozzo inserted in the side aisle ceilings of the University Church in Vienna (1704).¹⁷⁷

The Jesuits contributed decisively to the evolution and perfection of the sacred theater during the sixteenth and seventeenth centuries, and so it is of interest that it was they who commissioned Vittone to design his *apparato* for the *Quarant'ore* devotion at Santi Martiri. Vittone's selection by the Jesuits to design the *apparato* may have owed something to his association with Juvarra who earlier, for the same Jesuits at Santi Martiri, had designed the marble altar of the New Sacristy dedicated to St. Ignatius (1733) and the new marble altar of the church itself (1734).¹⁷⁸ Walter Canavesio has shown, on the basis of four of Vittone's drawings conserved in the Biblioteca dell'Archiginnasio in

¹⁷⁶ It is noteworthy that, 60 years prior to Vittone's first intervention at Santi Martiri, Pozzo had designed an altar there dedicated to St. Ignatius (1677-80). See G. DARDANELLO, "Altari piemontesi: prima e dopo l'arrivo di Juvarra," in A. Griseri and G. Romano, eds., *Filippo Juvarra a Torino. Nuovi progetti per la città* (Turin, 1988), pp. 153-228, here pp. 155-163; and IDEM., "Esperienze e opere in Piemonte e Liguria," in De Feo and Martinelli, eds., *Andrea Pozzo*, pp. 24-41, here p. 30, note 19 on p. 41.

¹⁷⁷ See OECHSLIN, "Vittone e l'architettura," p. 44, note 2, figs. 24-b, 20-c.

¹⁷⁸ The attribution of the altars to Juvarra was first made by L. CIBRARIO, *Storia di Torino*, 2 vols. (Turin, 1840-46), II, pp. 147, 586, note 10, a source I was unable to consult, but see MOCCAGATTA, "Bernardo Antonio Vittone," pp. 40, 57, notes 40-42, figs. 5-a, 5-b, 6-7; IDEM., "La chiesa dei Santi Martiri," (1971-72), p. 90, note 59, figs. 10-a, 10-b; IDEM., "La chiesa torinese," pp. 42-43, fig. 10-11; IDEM., "La chiesa dei Santi Martiri di Torino. Inserti di tardo Cinquecento nella settecentesca sistemazione degli arredi di sacrestia. Giovanni Taurino intagliatore," *Bollettino della Società Piemontese di Archeologia e Belle Arte* n.s. XXXII-XXXIV (1978-80), pp. 53-78, here pp. 54-55, note 12, p. 61, note 48; SIGNORELLI, "Per i Santi Martiri," p. 152, notes 97-98; CANAVESIO, "Presenze gesuitiche," p. 269, note. 1; and IDEM., *Piemonte Barocco*, p. 133.

Bologna, that Vittone was also active during 1733 at Santi Martiri designing the polychrome marble pavement of the presbytery (previously attributed to Juvarra).¹⁷⁹ Thus Vittone was at work at Santi Martiri during the same time that Juvarra was working there, and he continued to work there long after Juvarra's death in 1736.

Vittone followed a long line of distinguished Italian architects who produced work for the Society of Jesus. Bernini, as we have seen, enjoyed an especially close relation with the Jesuits and designed for them Sant'Andrea al Quirinale in Rome.¹⁸⁰ His student, Carlo Fontana, designed the Jesuit Sanctuary and College at Loyola, Spain.¹⁸¹ Fontana's contemporary, Andrea Pozzo, was a lay member of the Society of Jesus who designed and painted extensively for his order, including the *trompe l'oeil* frescoes that decorate the ceiling and walls of the Jesuit church of San Francesco Saverio (Missione) at Mondovì in Piedmont. Juvarra was himself closely tied to the Jesuits, having produced numerous stage sets for his Jesuit patron in Rome, Cardinal Pietro Ottoboni, as well as a number of projects for the Jesuits in Piedmont, including, besides the altars for Santi Martiri in Turin (1733-34), a number a unexecuted designs for the Jesuit church and seminary at Vercelli (1734).¹⁸²

¹⁷⁹ Bologna, Biblioteca dell'Archiginnasio, Gabinetto disegni e stampe, *Raccolta disegni autori vari*, nos. 227-230. See CANAVESIO, "Inediti vittoniani," p. 172; and IDEM., *Piemonte Barocco*, p. 135.

¹⁸⁰ Bernini also had ties to the Jesuits in Piedmont, although he never actually worked there. In 1672, at the request of Padre Cattaneo S.J., he prepared a project for the church of Sant'Andrea Apostolo and Santissimo Sacramento in Bra and sent it to Guarini who adapted it to the pre-chosen site and directed the work of construction; see BRAYDA/COLI/SESIA, "Ingegneri," p. 88.

¹⁸¹ Fontana's design incorporates a circular church modeled after Carlo Rainaldi's project for Santa Maria in Campitelli and above all after Bernini's Santa Maria dell'Assunta at Ariccia. On Fontana's sanctuary and college, see H. HAGER, "Carlo Fontana and the Jesuit Sanctuary at Loyola," *Journal of the Warburg and Courtauld Institutes* XXXVII (1974), pp. 280-289.

Vittone too, over the course of his practice, received many commissions from the Jesuits, beginning with the high altar dedicated to St. Ignatius of Loyola in the Sanctuary of Sant'Ignazio near Lanzo (1727) and ending with a number of projects at Santi Martiri, including the marble pavement in the presbytery of the church (1734), the *apparato* for the *Quarant'ore* devotion (1737), the renovation to the New Sacristy for which he produced a splendid Planterian vault (*ca.* 1751), a new main entrance portal to the church (1752), a new façade of the church (1768-70), and renovations and additions to the "Collegio Vecchio" adjoining the church (1768-70).¹⁸³ Vittone also designed a stairwell for the Jesuit College in Turin that he illustrates in *Istruzioni diverse*.¹⁸⁴ In addition, he produced various designs, also illustrated in *Istruzioni diverse*, associated with the Jesuits, including a pavement,¹⁸⁵ a door shutter,¹⁸⁶ and an

¹⁸² On Juvarra's work for the Jesuits at Vercelli, see V. VIALE, "Il progetto di Filippo Juvarra per la chiesa dei Gesuiti di Vercelli," in *Atti del X Congresso*, pp. 427-433; L. QUAGLINO PALMUCCI, "L'église des Jésuites de Verceil, aujourd'hui Santa Maria Maggiore," in *Congrès Archéologique du Piémont* (Paris, 1977), pp. 290-297; A. BELLINI, "Contributi al catalogo delle opere di Filippo Juvarra," in *Studi juvarriani*, pp. 277-323, figs. 1-17; and B. SIGNORELLI, "Il collegio e la chiesa dei Gesuiti a Vercelli," in M. Cassetti, ed., *Vercelli dal Medioevo all'Ottocento* (Vercelli, 1991), pp. 241-258, here p. 244, note 31 on p. 254.

¹⁸³ There is also the staircase in Santi Martiri datable to 1718 that Vittone describes and illustrates in *Istruzioni diverse*, p. 151, pl. 19: "...una Scala esistente nel Collegio de' MM. RR. PP. della Compagnia di Gesù in Torino," a work which, if indeed it were designed by Vittone, would have been constructed when the architect was only 14 years old; see SIGNORELLI, "Per i Santi Martiri," p. 153. The renovations to the "Collegio Vecchio" include the set back façade and the interior galleries capped by vaults with sunken round panels. On Vittone's work for the Jesuits at Santi Martiri in Turin, see E. OLIVERO, *Miscellanea di architettura piemontese del settecento* (Turin, 1937), pp. 14-16; PORTOGHESI, *Bernardo Vittone*, pp. 173-174, 229-230, pls. 53, 291-293; CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 40, no. 109, figs. 163-164; L. TAMBURINI, *Le chiese di Torino dal Rinascimento al Barocco* (Turin, 1968), p. 57; MOCCAGATTA, "Bernardo Antonio Vittone," pp. 33-59; IDEM., "La chiesa dei Santi Martiri," (1971-72), pp. 97-98, 108-109; IDEM., "La chiesa torinese," pp. 35-36; IDEM., "La chiesa dei Santi Martiri," (1978-80), p. 61, note 48; SIGNORELLI, "La chiesa dei SS. Martiri," p. 255, note 48 on pp. 56-57; IDEM., "Per i Santi Martiri," pp. 152-155; IDEM., "Una chiesa per maggior servizio di Dio, aiuto delle anime et ornamento di questa città," in B. Signorelli, ed., *I Santi Martiri: una chiesa nella storia di Torino* (Turin, 2000); CANAVESIO, "Inediti vittoniani," pp. 171-172, notes 7-8; IDEM., "Presenze gesuitiche," p. 269, note 1; and IDEM., *Piemonte Barocco*, pp. 135-136.

¹⁸⁴ VITTONI, *Istruzioni diverse*, pp. 151-152, pl. 19 (central figure).

oval *ancone* in which the IHS emblem comprising the Jesuit coat of arms is pictured atop the cornice.¹⁸⁷ Finally, there is Vittone's design for an altar "per S. Paolo" conserved in the library of the Jesuit Seminary at Vercelli.¹⁸⁸

In addition, Vittone's writings and the writings of his assistant and collaborator, Giovanni Battista Galletto (1712-93), whose tract on music and acoustics is appended to *Istruzioni diverse*,¹⁸⁹ are characterized by distinct hermetic and cabalistic strains of Jesuit thought.¹⁹⁰ Both Vittone and Galletto

¹⁸⁵ IBID., pl. 26 (lower left figure). See also CANAVESIO, "Inediti vittoniani," pp. 170-173; and IDEM., "Presenze gesuitiche," p. 269, note 1.

¹⁸⁶ VITTONI, *Istruzioni diverse*, pl. 27. See also A. MIDANA, *L'arte del legno in Piemonte nel Sei e nel Settecento: mobili, decorazioni, arredi, barocchi e rococò* (Turin, 1924), p. 197, pl. 370; MOCCAGATTA, "La chiesa torinese," p. 38; and CANAVESIO, "Presenze gesuitiche," p. 269, note 1.

¹⁸⁷ VITTONI, *Istruzioni diverse*, pl. 92. See also CANAVESIO, "Presenze gesuitiche," p. 269, note 1.

¹⁸⁸ The design is published by G. IENI, "Quattro disegni progettuali di Bernardo Vittone nelle biblioteche casalesi," *Monferrato Arte e Storia* VI (October 1994), pp. 5-22, here pp. 20-22, fig. 6, who believes that it may be a proposal for the altar of the Oratory of San Paolo in Turin. See also CANAVESIO, "Presenze gesuitiche," p. 269, note 1.

¹⁸⁹ VITTONI, *Istruzioni diverse*, "Istruzioni Armoniche o sia breve trattato sopra la natura del suono," pp. 219-324. On Galletto and his tract on music in Vittone's treatise, see OLIVERO, *Le opere*, pp. 63, 66, 74-75; RODOLFO, "Notizie inedite," pp. 449-451, notes 17-22 on p. 465; IDEM., "L'architettura barocca," pp. 140, 145; BRAYDA / COLI / SESIA, "Ingegneri," pp. 109, 148; CARBONERI, "Appunti," p. 67; POMMER, *Eighteenth-Century*, pp. 110, 120, note 5 on p. 121, note 30 on p. 124, note 88 on p. 133, p. 262; Carignano. *Appunti per una lettura della città*, 4 vols. (Carignano, 1973-80), I, pp. 90, 106, 158, 201; II, pp. 190, 192; III, pp. 75-76, 94, 96; IV, pp. 21, 24, 26, 53, 80, 88; WITTKOWER, "Vittone's Domes," p. 213; and CANAVESIO, "Presenze gesuitiche," pp. 269-285, with bibliography p. 271, note 7.

¹⁹⁰ Galletto entered Vittone's studio in 1750 where he remained active until Vittone's death in 1770 at which time he inherited many of Vittone's unpublished writings. In 1758 Galletto was enlisted in the drafting of Vittone's architectural treatises, which finally were published in 1760 and 1766, and his contribution to this endeavor appears to have been significant since Vittone singles him out for praise (but without mentioning him by name) in the Preface of *Istruzioni elementari* as a studious person, very dear to him, who was highly instrumental in bringing the treatise to a successful completion after so many years of interruptions and disturbances owing to the prosecution of Vittone's practice (*Istruzioni elementari*, Preface, pp. IV-V): "Concepita fu essa in gioventù fra i bollori d'un animo volenteroso di far profitto nell'Arte. Fu interrottamente proseguita fra le continue occupazioni, e disturbi, che ad un Architetto apporta l'esercizio di sua professione. Fu finalmente col favore del Cielo terminata non senza l'ajuto di Persona studiosa a me benevola, e cara, della fertilità del cui ingegno parte eziandio sono più fra le cose a formarla concorrono." See also FAGIOLO, "L'universo," pp. 117-118, note 1; and CANAVESIO, "Presenze gesuitiche," p. 271, note 6. Galletto also was

cite Jesuit authors who wrote on the occult sciences. For example, Vittone, in his chapter on heraldry in *Istruzioni elementari*, mentions several times the Jesuit, Claude-François Menestrier (1631-1705), who wrote on both emblems and the cabala.¹⁹¹ Vittone also cites Menestrier's book on heraldry, *La nouvelle methode raisonnée du blason*, which he did not own but which he presumably consulted.¹⁹² Menestrier was the author of another book, again which Vittone did not own, entitled *La philosophie des images enigmatiques*, which treats of the oracles, dreams, prophesies, and divinations of Nostradamus (1503-66), a subject of particular interest to Galletto.¹⁹³ Vittone also cites the Spanish Jesuit, Juan Bautista Villalpando (1552-1608),¹⁹⁴ who in collaboration with another Spanish Jesuit, Jerónimo del Prado (1547-95), wrote *In Ezechielem Explanationes*, a book that, steeped in hermetic thought, reconstructs the design

the author, together with Vittone, of a joint appraisal of the construction costs of San Bernardino at Chieri in 1742; see G. VANETTI, *Cappi Mastri e Maestranze nei cantieri del Vittone e del Quarini* (Chieri, 1992), pp. 23, 60, a source I was unable to consult, but cited in CANAVESIO, "Presenze gesuitiche," p. 271, note 7.

¹⁹¹ VITTONI, *Istruzioni elementari*, p. 548: "Fra questi il Padre Menestrier di nazione Tedesco, che in quest' Arte ha fatto grandi osservazioni..."; p. 554: "...derivano secondo P. Menestrier dai colori degli abiti..."; p. 574: "...e specialmente dal Padre Menestrier grandi volumi..." See also CANAVESIO, "Presenze gesuitiche," p. 278, note 53.

¹⁹² C.-F. MENESTRIER, S.J., *La nouvelle methode raisonnée du blason pour l'apprendre d'une maniere aisée, reduite en leçons par demandes, & par réponses* (Lyon, 1696), cited in VITTONI, *Istruzioni elementari*, p. 548: "...come rapportato trovasi nel Nuovo Metodo d'apprendere l'arte del Blason, stampato in Amsterdam nell' anno 1695..." There is no specific mention of Menestrier's book in the inventory of Vittone's library, but there are two anonymous books on heraldry, both entitled "L'Art du Blason," that are listed there, either one of which could have been the book penned by Menestrier; see PORTOGHESI, *Bernardo Vittone*, p. 249, nos. 566, 578. See also CANAVESIO, "Presenze gesuitiche," p. 278, note 53. On Menestrier, see "Menestrier," in C. SOMMERVOGEL, S.J. *Bibliothèque de la Compagnie de Jésus*, 10 vols. (Brussels-Paris, 1890-1909), V, coll. 905-943.

¹⁹³ C.-F. MENESTRIER, S.J., *La philosophie des images enigmatiques, ou il est traité des enigmes, hieroglyphiques, oracles. propheties, sorts, divinations, loteries, talismans, songes, Centuries de Nostradamus, de la baguette* (Lyon, 1694). See also CANAVESIO, "Presenze gesuitiche," p. 278, note 53.

¹⁹⁴ VITTONI, *Istruzioni elementari*, p. 330: "Villalpando vuole, che quest' Ordine tolga la sua origine dal Tempio di Salomone..."

for the Temple of Solomon as part of a commentary on the prophesies of Ezekiel.¹⁹⁵ Villalpando and del Prado's book is not found in the inventory of Vittone's library, although there can be little doubt that Vittone consulted it.¹⁹⁶

Galletto, in his addendum on harmonic instructions to *Istruzioni diverse*, cites the Jesuit authors, Daniello Bartoli (1608-85) and Athanasius Kircher (1602-80) and numerous passages from their respective treatises on music, *Del suono de' tremori armonici* and *Musurgia universalis*.¹⁹⁷ Vittone himself owned a

¹⁹⁵ J. DEL PRADO, S.J. and J.B. VILLALPANDO, S.J., *In Ezechielem Explanationes et Apparatus Urbis ac Templi Hierosolymitani. Commentariis et Imaginibus Illustratus, opus tribus tomis distinctum*, 3 vols. (Rome, 1596-1604). On del Prado and Villalpando's treatise, see R. TAYLOR, "Hermetism and Mystical Architecture in the Society of Jesus," in Wittkower and Jaffe, eds., *Baroque Art*, pp. 63-97, here pp. 63-81; A. PÉREZ-GÓMEZ, "Juan Bautista Villalpando's Divine Model in Architectural Theory," in S. Parcell and A. Pérez-Gómez, eds., *Chora III: Intervals in the Philosophy of Architecture*. Montreal: McGill-Queen's University Press, 1999, pp. 125-156; and S.R. KRAVTSOV, "Juan Bautista Villalpando and Sacred Architecture in the Seventeenth Century," *Journal of the Society of Architectural Historians* LXIV:3 (September 2005), pp. 312-339.

¹⁹⁶ VITTORE, *Istruzioni elementari*, pp. 264-265: "...nel Tempio di Salomone..."; p. 330: "Villalpando vuole, che quest' Ordine tolga la sua origine dal Tempio di Salomone..."; p. 363: "...già al Tempio di Salomone." Vittone did own a copy of Nicholas Goldmann's treatise, *Vollständige Anweisung zu der Civil-Bau-Kunst*, posthumously published by Leonhard Christoph Sturm who states in the dedication that the rational way of building has its origins in the Temple of Solomon. On the listing of Goldmann's treatise in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 249, no. 541. See CANAVESIO, "Presenze gesuitiche," p. 280.

¹⁹⁷ D. BARTOLI, S.J., *Del suono de' tremori armonici e dell'udito* (Rome, 1679); A. KIRCHER, S.J. *Musurgia universalis, sive ars magna consoni et dissoni*, 2 vols. (Rome, 1650). VITTORE, *Istruzioni diverse*, p. 222: "...fattane racconta d'aver appreso il Padre Bartoli al cap. 7. del terzo de' suoi trattati del suono..."; p. 223: "...per cui venir possa l'etere sonoro agitato; ed a questo principio il Padre Kircherio [sic], siccome leggo nella di lui Musurgia al cap. 12. del lib. 1..."; p. 227: "...a cui testificare s'accordano con Aristotile (dice il P. Bartoli)..."; p. 234: "...di tal sorta di sperimenti alcuno ne rapporta il Padre Bartoli sovracitato al cap. 3. del 2 de' di lui Trattati del suono..."; p. 238: "...che giusta il rapporto fattone dal P. Bartoli al cap. 5. del Trattato 2..."; p. 242: Però scrisse il P. Bartoli nel secondo de' suoi Trattati del suono al Cap. 6. che un muro scabro, e solamente arricciato non rende il terzo della voce, che in lui fa la ripercussione dell' Echo..."; p. 243: "Ed il già di sopra più volte citato P. Bartoli riferisce apprenderci Aristotile..."; p. 244: "...che rapportata trovo dal P. Bartoli anzidetto al cap. 6. del Trattato 2..."; p. 246: "...quale appunto esser leggo il rinomato Echo della celebre villa di Simonetta presso Milano, che va, e ritorna dall' una all' altra di due gran fronti di muro fra loro parallele, e distanti (a quel, che ne rapporta il Kircherio nella sua Musurgia lib. cap. 4. preclus. 2.) 33..."; p. 251: "...che al Cap. VII. del quarto de' suoi Trattati il P. Bartoli..."; p. 263: "...e ne sta in prova l'esperienza dal P. Bartoli riferita al cap. IV. del Trat. III..."; p. 264: "...che il Padre suddetto rapporta nel cap. stesso dicendo [...] siccome infatti sembrarono al succennato P. Bartoli..." See also OLIVERO, *Le opere*, p. 74; and CANAVESIO, "Presenze gesuitiche," p. 276, note 39.

copy of Bartoli's treatise (but not a copy of Kircher's treatise).¹⁹⁸ He also owned books written by other Jesuits, including Alfonso Rodríguez's *Esercitio di perfettione* (a book on spiritual exercises),¹⁹⁹ Tommaso Ceva's *Iesus puer* (a book of poems on the child Jesus),²⁰⁰ Filippo Buonanni's *Numismata Pontificum* (a book on papal numismatics),²⁰¹ Paul Laymann's *Theologiæ moralis* (a book on moral theology),²⁰² and Carlo Giacinto Ferrero's *Raccolto delle grazie e miracoli operati da S. Ignazio di Lojola* (a book on the miracles performed by St. Ignatius).²⁰³ This last book is significant since it was published in 1727, the

¹⁹⁸ On the listing of Bartoli's treatise in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 250, no. 708. On Bartoli, see "Bartoli," in SOMMERVOGEL, *Bibliothèque*, I, coll. 965-985; E. RAIMONDI, "Daniello Bartoli e la ricreazione del savio," in *Letteratura barocca. Studi sul Seicento italiano* (Florence, 1961), pp. 249-326; and M.L. ALTIERI BIAGI and B. BASILE, eds., *Scienziati del seicento* (Milan-Naples, 1980), pp. 1185-1216.

¹⁹⁹ A. RODRÍGUEZ, S.J., *Esercitio di perfettione e di virtù christianne* (Rome, 1619; 2nd. ed.). On the listing of Rodríguez's book in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 248, nos. 469, 482. See also CANAVESIO, "Presenze gesuitiche," p. 282, note 97. On Rodríguez, see "Rodríguez," in SOMMERVOGEL, *Bibliothèque*, VI, coll. 1946-63.

²⁰⁰ T. CEVA, S.J., *Iesus puer* (Milan, 1690). On the listing of Ceva's book in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 249, no. 563. See also CANAVESIO, "Presenze gesuitiche," p. 283, note 104. On Ceva, see "Ceva," in SOMMERVOGEL, *Bibliothèque*, II, coll. 1015-1023.

²⁰¹ F. BUONANNI, S.J., *Numismata Pontificum Romanorum quæ a tempore Martini V usque ad annum MDCXCIX, vel autoritate publica, vel privato genio in lucem prodire, explicata ac multiplici eruditione Sacra et Prophana illustrata*, 2 vols. (Rome, 1699). On the listing of Buonanni's book in the inventory of Vittone's library (recorded with Buonanni's name spelled as Bonanni), see PORTOGHESI, *Bernardo Vittone*, p. 250, no. 675. See also CANAVESIO, "Presenze gesuitiche," p. 283, note 107. On Buonanni, see "Buonanni," in SOMMERVOGEL, *Bibliothèque*, II, coll. 376-384.

²⁰² P. LAYMANN, S.J. *Theologiæ moralis in quinque libros partitæ, quibus materiæ omnes practicæ, cum ad externum ecclesiasticum, tum internum conscientiæ forum spectantes, nova methodo explicantur, & à quacunque propositionum prohibitarum suspitione vindicantur* (Venice, 1719). On the listing of Laymann's book in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 248, no. 454. See also CANAVESIO, "Presenze gesuitiche," p. 282, note 96. On Laymann, see "Laymann," in SOMMERVOGEL, *Bibliothèque*, IV, coll. 1582-1594.

²⁰³ C.G. FERRERO, S.J., *Raccolto delle grazie e miracoli operati da S. Ignazio di Lojola fondatore della Compagnia di Gesù, nella valle di Lanzo e in altri paesi, che han fatto ricorso al Santo nella sua cappella di Tortore posta nella medesima Valle* (Turin, 1727). On the listing of Ferrero's book in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 250, no. 718. See H. KARNER, "Jesuitische Sakralräume und ignatianische Spiritualität," *Acta historiae artis slovenica* VII (2002), pp. 31-42, for a discussion of the influence of Jesuit spirituality on the organization of the liturgical space and décor of Sant'Ignazio near Lanzo.

year that Vittone completed the high altar in the Sanctuary of Sant'Ignazio near Lanzo marking the site where the apparition of St. Ignatius had miraculously appeared in 1629, the very miracle which Ferrero describes in his book.²⁰⁴ In addition, Vittone owned three books by the Jesuit, Paolo Segneri (1624-94):²⁰⁵ *Panegerici sacri* (a treatise on sacred panegyric),²⁰⁶ *Il Quaresimale* (sermons on Lent),²⁰⁷ and *Il cristiano istruito* (a book on Christian instruction),²⁰⁸ and four books by the Jesuit, Emanuele Tesauro (1592-1675):²⁰⁹ *Il cannocchiale aristotelico* (a book on Aristotle's poetics and rhetoric),²¹⁰ *La filosofia morale* (a book on Aristotle's ethics),²¹¹ *Dell'arte delle lettere missive* (a collection of letters),²¹² and *Apologie in difesa de' libri* (an apologetic).²¹³ All of

²⁰⁴ Vittone's connection to the commission at Lanzo may have benefited from the mediation of a certain Filippo Maria Vittone († 1736), a Jesuit priest who entered the Society of Jesus in 1690 and who was minister and curator of the Ospedale and Missione of Lanzo (1707-11). No documents have yet been found to establish family relations between the two Vittones, the Jesuit priest and our architect. See CANAVESIO, "Presenze gesuitiche," p. 269, note 1.

²⁰⁵ See IBID., p. 283, notes 99-101. On Segneri, see "Segneri," in SOMMERVOGEL, *Bibliothèque*, VII, coll. 1050-1093.

²⁰⁶ P. SEGNERI, S.J., *Panegerici sacri* (Bologna, 1664). On its listing in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 249, no. 584.

²⁰⁷ P. SEGNERI, S.J., *Il Quaresimale* (Florence, 1679). On its listing in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 250, no. 724.

²⁰⁸ P. SEGNERI, S.J., *Il cristiano istruito nella sua legge. Ragionamenti morali data in luce da Paolo Segnori della Compagnia di Giesù*, 3 vols. (Florence, 1686; 2nd ed., Venice, 1687). On its listing in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 248, no. 478.

²⁰⁹ See CANAVESIO, "Presenze gesuitiche," p. 284, notes 114-116.

²¹⁰ E. TESAURO, S.J., *Il cannocchiale aristotelico, o sia idea dell'arguta et ingegnosa elocutione che serve à tutta l'Arte oratoria, lapidaria et simbolica* (Venice, 1663; facs. 1670 ed., Berlin-Zürich, 1968). On its listing in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 251, no. 729.

²¹¹ E. TESAURO, S.J., *La filosofia morale derivata dall'alto fonte del grande Aristotele Stagirita* (Turin, 1670). On its listing in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 249, no. 592.

²¹² E. TESAURO, S.J., *Dell'arte delle lettere missive* (Bologna, 1678). On its listing in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 249, no. 506.

these Jesuits lived entirely or in part during the seventeenth century when the modern, Baroque form of the sacred theater was being developed, a development that itself owed much to the writings of many of these same Jesuits.

Translation into Permanent Architecture

Background and Precedent

The prevailing ideas that governed Baroque designs for ephemeral and scenographic decoration strongly influenced the design of permanent architecture.²¹⁴ Notwithstanding Contini's strident declaration that buildings, requiring as they do sufficient solidity, grandiosity, majesty, and nobility, are fundamentally different from festival decorations and are not to be confused with them in any way,²¹⁵ it was largely through the efforts of another academician and Contini's colleague, Carlo Fontana, that designs for ephemeral and scenographic fabrications came to play "an increasingly

²¹³ E. TESAURO, S.J., *Apologie in difesa de' libri* (Turin, 1673). On its listing in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 249, no. 524.

²¹⁴ On the relation of ephemeral and scenographic decoration to permanent architecture, see H. HAGER, "Puntualizzazioni su disegni scenici teatrali e l'architettura scenografica del periodo barocco a Roma," *Bollettino del Centro Internazionale di Studi di Architettura Andrea Palladio* XVII (1975), pp. 119-129; IDEM, "Considerazioni," pp. 71-118; A.M. MATTEUCCI, "Architettura e grande decorazione: reciproche influenze in sistemi affini," in A.M. Matteucci, D. Lenzi, W. Bergamini, G.C. Cavalli, et al., eds., *L'Arte del settecento emiliano: Architettura, scenografia, pittura di paesaggio* (Bologna, 1980), pp. 3-15; and J.A. HATFIELD, "The Relationship between Late Baroque Architecture and Scenography 1703-1778: The Italian Influence of Ferdinando and Giuseppe Bibiena, Filippo Juvarra and Giovanni Battista Piranesi," Ph.D. dissertation, Wayne State University, Detroit, Michigan, 1981 (Ann Arbor, 1986).

²¹⁵ PASCOLI, *Vite de' pittori*, II, pp. 557-558; PORTOGHESI, *Roma Barocca*, p. 315.

influential part in the development of permanent architecture in Rome.”²¹⁶ In the words of John Pinto:

It is indeed reasonable to speak of an international style of late Baroque architectural design, originally formulated by Carlo Fontana, the full implications of which were realized by his many pupils such as Fischer von Erlach, Juvarra and Michetti. Not only did temporary architecture play an important part in the careers of Fontana’s students, particularly Michetti, but it proved a crucial agent in the dissemination of a new, more scenographic approach to architectural design throughout Europe.²¹⁷

Consequently, the boundaries between temporary stage sets and permanent architecture became increasingly obscured. Again in the words of Pinto:

In providing designs for the theatre, eighteenth-century architects were continuously striving for new and ever more striking illusionistic effects, and in the process the boundaries between painting and architecture as well as scenography and planning became blurred.²¹⁸

And in the words of Hanno-Walter Kruft:

At the end of the seventeenth century one may in general observe a shift of interest towards the depiction and optical effect of architecture. Architecture consequently begins to resemble stage decoration, which made systematic use of such optical effects, and buildings often acquire the appearance of stage-sets; a good example is Filippo Raguzzini’s Piazza S. Ignazio in Rome (1725-36). It is thus indicative that the most important Italian contribution to architectural theory at the turn of the century should have come from a painter and stage designer.²¹⁹

²¹⁶ BRAHAM, “Architectural Legacy,” p. 450.

²¹⁷ PINTO, “Nicola Michetti,” p. 313.

²¹⁸ IBID., p. 301.

Indeed, permanent structures often functioned as stage sets in their own right. Such was the case with Borromini's foreshortened garden passageway at the Palazzo Spada (1652-53), which originally served as a theatrical backdrop for the recitation of comedies in the garden of the palace.²²⁰ Such too was the case with several of Bernini's permanent structures, notably the Cornaro Chapel in Santa Maria della Vittoria and the Four Rivers Fountain in the Piazza Navona.²²¹ His Sant'Andrea al Quirinale, with its figures of St. Andrew and putti spilling out beyond the tympanum of the aedicule that frames the altar, and its façade flanked by concave walls in a manner analogous to theatrical wings, also takes on the character of a stage decoration translated into stone. Even its transverse oval plan, according to Hellmut Hager, was conditioned not by restrictions imposed by the site but by the possibility, suggested by the example of Palladio's Teatro Olimpico in Vicenza, of reuniting the faithful in a space capable of offering favorable conditions of a "sacred spectacle."²²²

Giovanni Antonio Gherardi (1638-1702), a painter and academician who followed Bernini in creating a highly scenographic architecture,²²³

²¹⁹ KRUFT, *History*, p. 194.

²²⁰ See NOEHLES, "Altari scenografici," pp. 168-170, who also suggests that there was a specific interrelation between Borromini's perspectival colonnade for the Palazzo Spada and Carlo Rainaldi's *apparato* for *Quarant'ore* devotion in the Gesù (1650).

²²¹ See A.S. HARRIS, "Bernini's *Four Rivers Fountain* as Permanent Theatre," in Wisch and Munshower, eds., *"All the world's a stage ..."*, pp. 488-516.

²²² H. HAGER, "Riflessi palladiani nell'architettura barocca romana," *Bollettino del Centro Internazionale di Studi di Architettura Andrea Palladio* XXIII (1981), pp. 45-69, here p. 58.

²²³ Gherardi apprenticed in the workshops of Pier Francesco Mola and Pietro da Cortona before receiving his first independent commissions in the late 1660s and gaining membership in the Accademia di San Luca by 1674.

applied the innovations of Sant'Andrea al Quirinale to his own design for the Avila Chapel in Santa Maria in Trastevere in Rome (1678-80).²²⁴ This is especially evident in the combination of sculpture and architecture in the lantern which encloses a tabernacle modeled in the form of a baldachin held aloft by four statues of angels (Figure 3.35), a type popularized earlier by Bernini in his project for the Cappella del Sacramento of St. Peter's (1658-61) and ciborium (1673-74), and ultimately derived from *apparati* designs for the *Quarant'ore* devotion, including notably the *apparato* of 1613 erected in the Gesù and Cortona's *apparato* of 1633 erected in San Lorenzo in Damaso.²²⁵ Moreover, Gherardi's constriction of the annular cornice of the vault and concealment of light sources produces a scenographic sequence of spatial layers which, much like a stage set, serves to simultaneously reveal and conceal the action of stucco figures above. In short, Gherardi's lantern serves as a *theatrum sacrum perpetuum* that, drawing upon the innovations of both Bernini and Borromini, anticipates Vittone's openwork domes.²²⁶

Gherardi also endowed the Santa Cecilia Chapel in San Carlo ai Catinari in Rome (1691-99) with the character of a scenographic decoration (Figure 3.36).²²⁷ Again, the reference to *apparati* for the *Quarant'ore* devotion is

²²⁴ On the connection between the Avila Chapel and Sant'Andrea al Quirinale, see OECHSLIN, "Vittone e l'architettura," pp. 43-44, note 5.

²²⁵ The motif of a tabernacle held aloft by angels made its appearance in the sixteenth century with, for example, Pellegrino Pellegrini's several designs for a ciborium for Pope Pius IV; see M.L. GATTIPERER, "Cultura e socialità dell'altare barocco nell'antica Diocesi di Milano," *Arte Lombarda* n.s. XX (1975), pp. 11-66, figs. 2-3.

²²⁶ T.C. PICKREL, "Antonio Gherardi, Painter and Architect of the Late Baroque in Rome," Ph.D. dissertation, University of Kansas, Lawrence, Kansas, 1981, pp. 104, 107-109, interprets Gherardi's lantern as a permanent version of the stage set for the sacred theater. See also, IDEM., "L'élan de la musique," pp. 239-240, notes 14, 18.

manifest. With its profusion of carved angels, draperies, and festoons, Gherardi's dome serves as a stage set for the sacred theater, a "micro-stage conceived as the apotheosis of the ephemeral."²²⁸

Carlo Fontana's permanent architecture is also notable for its striking scenographic quality.²²⁹ For example, his unexecuted project for the completion of the Piazza of St. Peter's (1695) would have produced, had it been realized, a remarkably theatrical effect.²³⁰ Fontana proposed to erect a clock tower far beyond the main oval of the Piazza so that the spectator, upon entering the forecourt, would have perceived the near and far ends of the colonnade arms as "isolated wings on a stage."²³¹

Likewise, Fontana's façade for San Marcello al Corso (1682-83), one of his most celebrated works, is notable for its scenographic quality. The central aedicule, together with the empty square frame positioned above, acts as a detachable screen.²³² Wittkower explains: "The principle here employed corresponds to that of theatrical wings."²³³

²²⁷ IDEM., "Antonio Gherardi," pp. 112-113. On the Santa Cecilia Chapel, see also IDEM., "L'élan de la musique," pp. 237-254; and P. FERRARIS, "Antonio Gherardi e la cappella di Santa Cecilia in San Carlo ai Catinari a Roma," *Studi di Storia dell'arte* 2 (1991), pp. 213-241.

²²⁸ FAGIOLO DELL'ARCO/CARANDINI, *L'Effimero barocco*, p. 118: "La cappella del Gherardi è un micro-palcoscenico concepito come apoteosi dell'effimero..."

²²⁹ BRAHAM, *Funeral Decorations*, p. 2, states that Fontana's buildings and architectural projects "...embody a simplification of the architectural style of Bernini that has earned Fontana the reputation of being the main pioneer of scenographic architecture as it developed in the early eighteenth century."

²³⁰ WITTKOWER, *Art and Architecture*, p. 375, fig. 250.

²³¹ IBID., p. 376.

²³² According to Wittkower the open frame was to have been filled with a relief (IBID., p. 376, note 13 on p. 554, fig. 249). The same motif, an empty square frame set above a doorway, is also common to Borromini's architecture, as seen, for example, in several portals in the Oratory of the Filippini in Rome; see P. PORTOGHESI, *The Rome of Borromini, Architecture as Language*, Translated by B.L. La Penta (New York, 1968), pl. 286, fig. 224.

Fontana also designed an unexecuted project for a centrally planned martyrial church in the Colosseum (1676-79) that he conceived as a sacred theater (Figure 3.37).²³⁴ Fontana was commissioned to design the project by Pope Innocent XI, perhaps in response to the religious events connected with the Holy Year of 1675, to commemorate the ancient Christians martyred in the Colosseum, a project that, despite Fontana's best efforts, was never realized.²³⁵ Fontana's stated intention, expressed in the introduction to *L'Anfiteatro Flavio*, was to transform the Colosseum into a *Teatro Illustre de Martiri*.²³⁶ And he conceived his "teatro" as a centrally planned church to have been placed at one end of the longitudinal axis of the oval arena (Figure 3.38), situated in such a manner that "the ancient ruins would have formed somber wings to the centre of the stage on which the house of God was to stand."²³⁷ Indeed, the placement of a rotunda on axis at the end of an open oval space had precedents in theater design, including, for example, Orazio Torriani's Theater at Monte Giordano for Ferdinand III (1637) and Giacomo Torelli's architectural scene from *La Venere gelosa* (1643).²³⁸ The arrangement occurred not only in the profane theater, but in the sacred theater as well, as seen, for

²³³ WITTKOWER, *Art and Architecture*, p. 373.

²³⁴ On Fontana's Colosseum project, see HAGER, "Carlo Fontana's Project," pp. 319-337; IDEM., "Introduction," in Fontana, *L'Anfiteatro Flavio*, pp. ix-xxxvii; and WISCH, "The Colosseum," pp. 94-111.

²³⁵ The original commission fell through without any notable construction having taken place due to financial difficulties arising from the contemporary war against the Turks. A second revised project for the church was undertaken soon after the Holy Year 1700 under Pope Clement XI, but it too was relinquished in the face of the War of the Spanish Succession and renewed threats from the Turks.

²³⁶ HAGER, "Carlo Fontana's Project," p. 337; WISCH, "The Colosseum," p.95.

²³⁷ WITTKOWER, *Art and Architecture*, p. 376.

²³⁸ FAGIOLO DELL'ARCO/CARANDINI, *L'Effimero barocco*, figs. 263, 412.

example, in one of Giovanni Domenico Roccamora's projects for an *apparato* for the *Quarant'ore* devotion published in *Parte prima (e seconda) delle cifre dell'Eucharistia* (Rome, 1668-70).²³⁹

Fontana's Colosseum project was conceived as a permanent version of the type, to have been constructed of stone and mortar.²⁴⁰ Though never executed, it nevertheless exerted a profound impact on subsequent design, both for temporary decoration and permanent architecture, as seen, for example, in Pozzo's project for the *apparato* for the *Quarant'ore* devotion for the Gesù of 1695,²⁴¹ and in several designs for centralized churches by Juvarra and Derizet.²⁴² Fontana's project also appears to have influenced the course of study at the Accademia di San Luca, and in particular several of the subjects set for the *Concorsi Clementini* competitions.²⁴³

²³⁹ IBID., fig. 544.

²⁴⁰ The idea of wrapping "somber wings" around a rotunda was first suggested by Bernini's Santa Maria dell'Assunzione at Ariccia (1662-64), a church on which Fontana himself had worked, and one that, like Fontana's Colosseum project, was conceived as a rotunda set on axis deep within a concave enclosure. See HAGER, "Carlo Fontana's Project," p. 326, 327, who notes the similarities between Fontana's Colosseum project and Bernini's rotunda at Ariccia. It is noteworthy that, with respect to Pope Innocent XI's original commission, Bernini had opposed any intervention in the Colosseum, preferring that it be left intact, and so the Pope turned instead to Fontana.

²⁴¹ The affinity between Fontana's project and Pozzo's *apparato* is discussed by HAGER, "Considerazioni," pp. 81, 86, fig. 10.

²⁴² These include Juvarra's student project presented to the Accademia di San Luca (1707), Juvarra's Superga outside Turin (1717-31), and Derizet's Santissima Nome dei Maria in Trajan's Forum in Rome (1736-41); see IDEM., "Carlo Fontana's Project," p. 331.

²⁴³ IBID., p. 331. The competition design of 1713 for a circular church to be erected in honor of the saints canonized on 23 May 1712, and the competition design of 1716 for a church to be erected in honor of a victory, both owe something to the example of Fontana's Colosseum project. So too, apparently, does the theme selected for the Second Class competition in architecture for the *Concorso Clementino* of 1732, a stone theater according to the use of ancient Romans; see MARCONI/CIPRIANI/VALERIANI, *I disegni*, I, pp. 16-17, nos. 412-417, figs. 412-417 (in which the name "Massazza" is misspelled as "Marazza"); and CIPRIANI, ed., *Æqua Potestas*, pp. 138-139, nos. IV.26-IV.28 (in which the name "Massazza" is again misspelled as "Marazza").

Outside Rome, in Piedmont, designs for ephemeral and scenographic decoration also served to influence the design of permanent architecture. In Turin especially a tradition of theatrical spectacle, indeed a “mania for the theatrical,” was sponsored by both the Savoyan court and the Church, manifest not only in the commissioning of sumptuous ephemeral and scenographic decorations, but of permanent architecture as well, and in particular Guarini’s openwork churches of the 1670s. Pommer writes:

The court and the religious orders put on innumerable dance performances, dramas, festivals, and sacred plays. The drab city was splendidly costumed for royal marriages and triumphal entries; the churches were richly decked out for funerals and the “Quarant’ore.” Soon the taste was felt in real architecture. Guarini’s vaults of San Lorenzo and the Santissima Sindone can hardly have appealed to eyes unaccustomed to the spectacular machinery of religious dramas.²⁴⁴

Both San Lorenzo and the Sindone feature interlaced ribbed domes that are arranged and illuminated in a manner of stage sets. Guarini’s Immacolata Concezione in Turin also serves as a theater in which, as Pommer describes it, the laity look through the ‘proscenium’ of the transept onto the ‘stage’ of the sanctuary dominated by a huge altar.²⁴⁵

Decades later Juvarra would create a permanent architecture in Piedmont that likewise incorporated the scenographic conventions of stage set design. Indeed, many of Juvarra’s architectural ideas were first developed in connection with his work in the theater.

²⁴⁴ POMMER, *Eighteenth-Century*, p. 13.

²⁴⁵ IBID., p. 81.

For many architects, and this is especially true of Juvarra in his early designs, the theatre was both a laboratory in which new ideas could be tested and an opportunity to project fantastic structures which no patron's resources would ever be sufficient to build.²⁴⁶

Thus Juvarra's architectural style came to be founded on the same infatuation with light, spectator viewpoints, and aerial qualities that inform his stage designs.²⁴⁷ This can be readily seen in the one permanent work that Juvarra erected in Rome before departing for Piedmont in 1714, namely the Antamoro Chapel in San Girolamo della Carità (1708), which, as James Allen Hatfield puts it, "illustrates the artist's theatrical concepts translated to architecture."²⁴⁸

Juvarra found in Piedmont a congenial architectural ambient that had been cultivated by the leading scenographers of an earlier day. For many years, between 1680 and 1708, Ferdinando Galli Bibiena and his brother, Francesco, had worked in Piedmont and Lombardy producing theaters in Turin, Genoa, and Milan. Likewise, Pozzo had been active in Piedmont during his early career — painting illusionistic frescoes in the church of San Francesco Saverio (Missione) in Mondovì and designing an altar (now lost) in the church of Santi Martiri in Turin. The impact of this activity on permanent building can be vividly seen in the Palazzo Gozzani di Treville at Casale Monferrato, erected between 1711 and 1714 by Giovanni Battista Scapitta and completed by his nephew, Vincenzo Scapitta, sometime around 1725.²⁴⁹ Here

²⁴⁶ PINTO, "Nicola Michetti," p. 301.

²⁴⁷ HATFIELD, "Relationship," p. 173.

²⁴⁸ IBID., p. 173. On the Antamoro Chapel, see H.A. MILLON, "The Antamoro Chapel in S. Girolamo della Carità in Rome: Drawings by Juvarra and an Unknown Draftsman," in H.A. Millon, ed., *Studies in Italian Art and Architecture*, pp. 261-288; and IDEM., "Filippo Juvarra and the Antamoro Chapel in S. Girolamo della Carità in Rome," in *Studi juvarriani*, pp. 99-125.

the atrium and the courtyard are organized in plan around the scenographic principle of a *scena per angolo*, the employment of which followed upon Francesco Galli Bibiena's earlier activity in Casale Monferrato itself.²⁵⁰

It was during the very years that the Palazzo Gozzani di Treville was undergoing construction that Juvarra designed his first scenographic work of architecture, the Palazzo Martini di Cigala in Turin (1716-19). It features a scenic atrium, the original idea for which Juvarra explored in his stage set designs and scenographic caprices of the previous decade. Light enters the atrium and "filters into the hallways in the same manner that the scenographer used light to add illusion to his perspective views."²⁵¹ It is a painterly use of light, to be sure, applied to architecture, and sharpened by Juvarra's training in the theater.²⁵²

In 1716 Juvarra erected another palace, the Palazzo Birago di Borgaro in Turin, which he again treated as a theatrical stage set. Here he used scenographic principles of design to achieve an illusion of spatial extension in depth. The entry, atrium, courtyard, rear court, and blind portal centered on the rear wall are all aligned on axis, with the low curved walls of the courtyard forming a concave termination that, in the manner of the scenic

²⁴⁹ On the Palazzo Gozzani di Treville, see GABRIELLI, *L'arte a Casale*, pp. 38-39, figs. 32-33; CARBONERI, "Architettura," in *Mostra del Barocco*, I, pp. 64-65, nos. 177-178; TORNIELLI, *Architetture di otto secoli*, pp. 70-73, pls. LVI-LXII; M. VIALE FERRERO, *Ritratto di Casale* (Turin, 1966), pp. 62, 64-65, pl. XVII; E. CORNAGLIA, ed., *Mostra degli Scapitta: Giovanni Battista Scapitta architetto e Vincenzo Scapitta agrimensore* (Casale Monferrato, 1968), pp. 31-32, no. 22, figs. 17-23; and H.A. MILLON, "Scapitta, Giovanni Battista," in Placzek, ed., *Macmillan Encyclopedia of Architects*, III, p. 672.

²⁵⁰ See MATTEUCCI, *L'architettura del Settecento*, pp. 223-224, figs. 1-2. On the influence of the *scena per angolo* on Baroque architectural design in general, see IDEM., "L'influsso della 'veduta per angolo' nell'architettura barocca," in Schnapper, ed., *La scenografia barocca*, pp. 129-139.

²⁵¹ HATFIELD, "Relationship," pp. 175-176.

²⁵² IBID., p. 176.

wings of a stage, is split apart at the center to reveal and frame a view fixed on the blind portal of the rear wall beyond (Figure 3.39). In short, the concave walls of the courtyard function as the scenic wings, and the blind portal of the rear wall functions as the backcloth, of a stage set. The scenographic character of the palace is enhanced by the incorporation of feigned perspectives in the blind portal itself (Figure 2.4) and the central window on the *piano nobile* of the garden façade (Figure 2.3). Juvarra, who “always catered to and was concerned with the spectator’s viewpoint” in his architecture, established the spectator’s viewpoint in the atrium of the Palazzo Birago di Borgaro as though it were the auditorium of a theater, and arranged the courtyards beyond according to a controlling perspective.²⁵³

The Palazzo Birago di Borgaro served as a stimulus to Gian Giacomo Plantery, who in a like manner conceived his Palazzo Cavour in Turin (1729) as a theatrical stage set. Its axial alignment of entrance, atrium, perspectival portal, passageway, and courtyards produces a scenographic effect very similar to that of Juvarra’s palace (Figure 2.6). The rear wall of the court of honor functions in the manner of theatrical wings, its forced perspectival portal framing a view of the blind portal centered on the service court beyond.

Contemporary with the Palazzo Cavour is Juvarra’s Palazzina at Stupinigi (1729-35), one of the most remarkable works of scenographic architecture to appear in Piedmont (Figure 3.40). The building is dominated by an oval *salone* from which four residential wings radiate, diagonally disposed in a manner that, while recalling Germain Boffrand’s Château de Malgrange and Johann Bernhard Fischer von Erlach’s palace for Count Althan

²⁵³ IBID., pp. 139, 174-175.

(Figure 3.41), more likely reflects Juvarra's extensive experimentation with similarly planned stage sets.²⁵⁴ Indeed, one of Juvarra's early sketches of the *salone* was closely anticipated by one of his stage sets for the Teatro Ottoboni.²⁵⁵ The scenographic character of the Palazzina is enhanced by the numerous perspectival windows and portals (Figure 2.5), and by the diagonal disposition of the exterior wings, of which the corners are set at varied angles to the main axis of approach according to the principle of *scena per angolo*.

The *salone* in particular takes on the character of a scenographic and ephemeral decoration. As completed it is, in Millon's words, "ephemeral architecture made permanent if not substantial."²⁵⁶ Juvarra designed the *salone* vault independently of its exterior shell, hanging it from the roof above in addition to supporting it on four attenuated piers.²⁵⁷ In order to reduce the load, he fabricated it out of wood and plaster, the same materials used to make festival decorations. The ephemeral quality of the *salone* is reinforced by the festive display of stucco, fresco, urns, niches, and statues. The *salone* was built primarily as a ballroom, but it also functioned at times as a theater,

²⁵⁴ C. NORBERG-SCHULZ, *Late Baroque and Rococo Architecture* (New York, 1974), p. 241, note 23 on p. 362. It is noteworthy that Joseph Furtenbach adopted this same *parti*, a central space with four arms projecting on the diagonal axes, for his theater project of 1650; see E. BILARDELLO, "L'evoluzione del teatro barocco: pratica e trattati," in *Il Teatro a Roma nel Settecento*, I, pp. 35-70, here pp. 45-46, fig. 3.

²⁵⁵ POMMER, *Eighteenth-Century*, figs. 82-83. The *salone* is also comparable in its scenographic character to Giuseppe Galli Bibiena's "Palazzo in Villa" illustrated in *Architetture e prospettive*, III, pl. 7; see HAGER, "Considerazioni," p. 108, figs. 27-28.

²⁵⁶ H.A. MILLON, "Juvarra, Filippo," in Placzek, ed., *Macmillan Encyclopedia of Architects*, II, pp. 519-533, here p. 530.

²⁵⁷ The vault is actually hung from four arches which rise above the piers and support the armature of the roof. See M. PASSANTI, "La Palazzina di caccia di Stupinigi, di Filippo Juvarra," *L'architettura, cronache e storia* III:22 (August 1957), pp. 266-275, here p. 269, who publishes a simplified section. See also POMMER, *Eighteenth-Century*, p. 71, note 2.

complete with seating for an audience (Figure 3.42).²⁵⁸ In the words of Pommer:

The salon was a theatre for balls, sometimes with auditorium seats. Small wonder then that of all Juvarra's buildings it most resembled stagesets, with their tall rooms raised on attenuated piers, as well as festival architecture, with its wood, plaster, canvas and paint.²⁵⁹

In the words of Sacheverell Sitwell:

There was almost nothing to which Juvarra could not put his hand; and his strong theatrical talent must have seen in Stupinigi the opportunity of making permanent something which was of its nature stage scenery and a stage spectacle and could not expect or hope for longer life than that.²⁶⁰

And in the words of James Allen Hatfield:

The salon was to be a theater within a theater. Society demanded that the theatrics of daily courtly life be appropriately staged as well as the occasional theatre performances.²⁶¹

This then was the "stunning stage" upon which, before his audience and court, the king would simultaneously "act or live" out his dual roles as hunter and ruler.²⁶² Even the short galleries extending beyond either end of the

²⁵⁸ A drawing rendered in 1773 by Vittone's assistant, Mario Ludovico Quarini, and today conserved in the Archivio di Stato of Turin, shows the *salone* outfitted with seats and a stage in the manner of a theater. See V. MOCCAGATTA, "L'architetto Mario Ludovico Quarini e le sue opere," *Atti e rassegna tecnica della Società degli Ingegneri e degli architetti di Torino* n.s. XII:5 (May 1958), pp. 3-44, here p. 19, fig. 25; and POMMER, *Eighteenth-Century*, pp. 63, 215, § 55-B.

²⁵⁹ POMMER, *Eighteenth-Century*, p. 63.

²⁶⁰ SITWELL, *Baroque and Rococo*, p. 131.

²⁶¹ HATFIELD, "Relationship," p. 138.

²⁶² MILLON, "Juvarra," in *Macmillan Encyclopedia*, II, p. 530.

galleries were conceived as “stage wings for the exits and entrances in the occasional theater of court festival and the permanent one of courtly life.”²⁶³

It is in his religious buildings and projects that the scenographic character of Juvarra’s architecture is especially manifest. For example, his project for the Sacristy for St. Peter’s (1714-15) features a surplus of openings and fragmented views that bear unmistakable similarities to the stage sets that he designed for Cardinal Ottoboni.²⁶⁴ Likewise, his early designs for the Venaria Reale (1715-28) feature an aerial quality and a dispersion of viewpoints and views very similar to those found in theater scenography.²⁶⁵ The same is true of his project for the Duomo Nuovo (1728-30), in which “forking views,” arranged according to the scenographic principle of *scena per angolo*, are presented to the spectator standing at the entrance.²⁶⁶ One of Juvarra’s more theatrical designs is that for the Superga near Turin (1717-31), in which two antithetical viewpoints vie with one another for accommodation, a close up view from the hill and a distant one from the city. Juvarra chose to accommodate the distant view at the expense of the nearer one, a decision that has been credited to his scenographic sensibility.

It seems probable that his theatrical training in scenography and spectator sightlines forced the artist to place a value on the best viewpoint, as if he were rating the audience’s view from seats in the theatre.²⁶⁷

²⁶³ POMMER, *Eighteenth-Century*, p. 63.

²⁶⁴ IBID., p. 25; HATFIELD, “Relationship,” p. 174.

²⁶⁵ POMMER, *Eighteenth-Century*, p. 32; HATFIELD, “Relationship,” p. 132.

²⁶⁶ POMMER, *Eighteenth-Century*, p. 51; HATFIELD, “Relationship,” p. 180.

²⁶⁷ IBID., p. 175.

Juvarra's lost church of Sant'Andrea at Chieri (1728-33, demolished 1803) also incorporated ideas that were first explored and developed in his designs for stage sets.²⁶⁸ The cylindrical arches of the vault, for example, were of a type that occurred frequently in Juvarra's scenographic projects. Finally, there is Juvarra's Santa Maria del Carmine in Turin (1732-35) with its full height side chapels and pseudo-gallery, which, as Hager observes, were prefigured in Juvarra's earlier stage set, *Gallery with Columns*, designed for the Teatro Ottoboni.²⁶⁹ Likewise, the vertex openings in the chapels of the Carmine are analogous to the one that Juvarra designed earlier for the vestibule in another one of his stage sets for the Teatro Ottoboni.²⁷⁰ In sum, Juvarra's light and airy church designs are the logical extension of ideas he first developed in his stage set designs.

Outside Piedmont, in other regions of northern Italy, there is the illusionistic architecture of the scenographer and painter, Ferdinando Galli Bibiena, and his son, Antonio. Although both father and son were trained primarily in the theater arts, each applied his hands to the practice of architecture, adapting the principles of scenography to the design of permanent buildings. In the church of Sant'Antonio Abate at Parma (1712-66), for example, Ferdinando conceived a perforated, double-shelled vault that takes on the character of a stage set, albeit one that is permanent rather than transient (Figures 3.43-3.44).²⁷¹ The diaphanous inner shell of the vault is a

²⁶⁸ POMMER, *Eighteenth-Century*, p. 40; HATFIELD, "Relationship," p. 181.

²⁶⁹ HAGER, "Considerazioni," p. 98, fig. 20.

²⁷⁰ IBID., p. 79, fig. 9.

²⁷¹ On Sant'Antonio Abate at Parma and its perforated vault, see V. COMOLI MANDRACCI, "«Cielo» e iconografia in alcune chiese di derivazione guariniana: S. Antonio Abate di Parma e di Villa Pasquali, Sacro Cuore di Maria di Torino," in Viale, ed., *Guarino Guarini e*

non-load bearing fabric, its many perforations serving to frame views of the frescoes painted on the intrados of the outer shell. The purpose of this double-shelled vault is primarily theatrical rather than structural, with the inner shell acting in the manner of the wings, the outer one in the manner of the backcloth, of a stage set. The space between the two shells, illuminated by clerestory windows concealed from the spectator's view by the interposition of the inner shell, serves as a large light chamber. These concealed windows illuminate the outer shell of the vault in much the way that concealed lamps illuminate the backcloth of a stage. Ferdinando's vault thus acts like a stage set for religious theater. It is a permanent fixture, however, a *theatrum sacrum perpetuum*, built of lasting stone rather than transient wood and canvas.

The same holds true for Antonio Galli Bibiena's lacework domes in the Chapel of the Santissimo Sacramento in the church of Santa Maria dell'Assunta in Sabbioneta (1768; Figure 3.45), and in the parish church of Sant'Antonio Abate at Villa Pasquali near Sabbioneta (1765-84; Figures 3.46-3.47), both of which are diaphanous, masonry structures that serve in effect as permanent theater.²⁷² The dome and semi-domes of Antonio's church at Villa Pasquali feature an elaborate system of double shells, concealed windows, light chambers, diffused lighting, and fresco that creates an illusion of spatial

l'internazionalità, II, pp. 391-410; A. COCCIOLI MASTROVITI, "Architettura e scenographia in due chiese di derivazione guariniana: S. Antonio Abate di Parma e di Villa Pasquali," *Parma nell'Arte* no. 2 (1986), pp. 58-64; a source I was unable to consult; and F. GRIGNAFFINI, "Architettura e volte traforate. La chiesa di Sant'Antonio Abate a Parma (1712-66)," Thesis, Politecnico di Milano, Milan, 1993-94, another source I was unable to consult.

²⁷² On the Chapel of the Santissimo Sacramento, see A. PUERARI, *Sabbioneta* (Milan, 1955), fig. 22. On Sant'Antonio Abate at Villa Pasquali, see D. DE BERNARDI, "La chiesa di Villa Pasquali presso Sabbioneta e le sue volte «a prospettive celesti»," *Arte Lombarda* XI:1 (1966), pp. 51-56; G. SCAZZA, "Una creazione di Antonio Bibiena: La chiesa parrocchiale di Villa Pasquali," in *Chiesa e conventi del contado mantovano* (Florence, 1968), pp. 107-123; COMOLI MANDRACCI, "«Cielo» e iconografia," pp. 398-399; and MATTEUCCI, *L'architettura del Settecento*, pp. 279, 281.

extension. The inner one of the two shells is a filigree of attenuated masonry ribs, not so much a shell as a lacework of tracery that permits a view to the frescoes painted on the outer solid shell. According to Daria De Bernardi, the inner and outer shells of the dome and semi-domes are substituted for the wings and backcloth of a stage set, and the natural light of the windows is substituted for the artificial light of the lamps of the stage.²⁷³ Likewise, Oechslin explains Ferdinando and Antonio's domes as having been derived from traditions of certain types of ephemeral *apparati* of garden casinos.²⁷⁴

The design of church altars also came to be influenced by temporary decorations, particularly those associated with the sacred theater.²⁷⁵ The *apparato* for the *Quarant'ore* devotion itself functioned as a type of altar, for upon it was placed an urn or monstrance containing the Eucharistic Host. It is not surprising then that in both its form and ornament, the altar should find parallels with the temporary *apparato*. In the words of Karl Noehles:

The concept of the altar necessarily resembled that of the theater for the adoration of the Holy Sacrament from the moment in which God is permanently present upon the altar. The tabernacle, house of the Eucharist, became the center of a scenographic composition, "the true point of the eye, that is Divine glory," to repeat the words of Padre Pozzo.²⁷⁶

²⁷³ DE BERNARDI, "La chiesa di Villa Pasquali, p. 55.

²⁷⁴ OECHSLIN, "Vittone e l'architettura," p. 41.

²⁷⁵ On the influence of ephemeral and scenographic decorations on the design of permanent altars, see NOEHLES, "Altari scenografici," pp. 161-173; IDEM., "Visualisierte Eucharistietheologie," 92-116; IDEM., "Scenografie," pp. 151-155; and IDEM., "Teatri per le Quarant'ore," pp. 88-99.

²⁷⁶ IDEM., "Scenografie," pp. 154-155.

Indeed, the origins of the scenic altar are rooted in the Council of Trent's reaffirmation of the doctrine of the real and permanent presence of the Body of Christ in the Eucharist. This exaltation of the Sacrament, together with the other liturgical innovations formulated by the Council, required an appropriate architectural setting, and for this purpose St. Charles Borromeo (1538-84) codified a set of norms governing church buildings and furnishings which he published in 1577 as *Instructiones Fabricae et Supellectilis ecclesiasticae*.²⁷⁷ The custody of the Sacrament was no longer to be located in a casual place, but in a proper tabernacle positioned at the center of the high altar. And the throne held aloft by two cherubim, a type closely related to the monstrances designed by Cortona and Bernini for the theater of the *Quarant'ore* devotion, became a common model for Baroque tabernacles.²⁷⁸

The close formal interconnections between the scenic altar and temporary decorations for the sacred theater may be seen in Cortona's project of 1634 for the high altar in San Giovanni dei Fiorentini in Rome, a project that features many of the same elements found in his design for the *apparato* for the *Quarant'ore* devotion erected just one year earlier in San Lorenzo in Damaso.²⁷⁹ Cortona's altar project was one of the very first to incorporate hidden light sources of the kind commonly employed in both sacred and profane stage sets. However, in lieu of the lamps and candles used in stage sets, Cortona's project incorporated windows, recessed into the wall and screened by

²⁷⁷ See E.C. VOELKER, "Charles Borromeo's *Instructiones Fabricae et Supellectilis ecclesiasticae*, 1577, A Translation with Commentary and Analysis," Ph.D. dissertation, Syracuse University, Syracuse, New York, 1977.

²⁷⁸ NOEHLES, "Scenografie," p. 155.

²⁷⁹ On Cortona's altar project for San Giovanni dei Fiorentini and its relation to his *apparato* for San Lorenzo in Damaso, see IDEM., "Altari scenografici," pp. 163-166, figs. 84, 86.

columns, to either side of the altar. Thus while the actual choir was severely restricted in depth, Cortona was able to create a convincing illusion of spatial extension by means of *chiaroscuro*. In its arrangement of hidden windows, together with its deployment of sculpted figures of angels and clouds, Cortona's altar project for San Giovanni dei Fiorentini was very similar in form to stage sets for the *Quarant'ore* devotion.²⁸⁰

Bernini also designed a number of altars that resembled stage set designs erected for the *Quarant'ore* devotion.²⁸¹ His Raimondi Chapel in San Pietro in Montorio in Rome (ca. 1638) was conceived as a *theatrum sacrum perpetuum* in which hidden windows are inserted to either side of the altar to illuminate the central scene of the Ecstasy of St. Francis.²⁸² Along the lateral walls of the chapel Bernini represents the deceased members of the Raimondi family as spectators who, depicted as kneeling behind their sarcophagi in an act of perpetual prayer, behold the miraculous vision of St. Francis. The theatrical character of the chapel is manifest. The altar, with its scene of St. Francis, serves as a stage, and the lateral wall, with its representation of the Raimondi family beholding the mystical vision, serves as an auditorium.

²⁸⁰ BAUER, "From Architecture," p. 145, notes the extremely close ties between Cortona's full-scale model of the San Giovanni dei Fiorentini altar and his scenographic decoration. In the first place, Cortona's model was exposed to the public on the feast day of the church's patron saint, John the Baptist, very much like a decoration in its own right (as reported in an *avviso* published by POLLAK, *Die Kunsttätigkeit*, I, p. 164). In the second place, Cortona's *apparato* for the *Quarant'ore* devotion of 1638 included an actual model of the altar, which, according to Cardinal Barberini's intention, was to have been erected in permanent materials.

²⁸¹ On the relation of Bernini's permanent architecture to designs for temporary *apparati* for the *Quarant'ore* devotion, see HIBBARD, *Bernini*, p. 136; BJURSTRÖM, "Baroque Theater," pp. 107-108; WEIL, "Devotion," p. 234, note 45; and FAGIOLO DELL'ARCO/FAGIOLO, *Bernini*, pp. 58, 74, 193, 250, cat. no. 53.

²⁸² NOEHLES, "Altari scenografici," pp. 162-163. On the role of hidden lighting in the Raimondi Chapel, see LAVIN, *Bernini and the Unity*, I, pp. 33-36, II, figs. 15-16, 22, 49-50.

Bernini's conception of the chapel as a *theatrum sacrum perpetuum* reached its most persuasive expression in his design for the funerary chapel of the Cornaro family in Santa Maria della Vittoria in Rome (1645-52).²⁸³ Marble relief of deceased members of the Cornaro family are carved on the lateral walls of the chapel, set within simulated theater boxes delineated in perspective. This perspectival illusion induces the spectator's eye to behold the mystical vision of St. Teresa in Ecstasy represented on the central altar that Bernini has transformed into a stage. The figure of the ecstatic saint is bathed in a light that emanates from a concealed source above the altar.

The protagonist of all the action is the light, because it acts as the expressive means of the fundamental theme of this sacred theater, that wants to represent the penetration of divine grace into the beatified soul, capable of dematerializing the physical existence of the human in an "*unio mystico*."²⁸⁴

The open space of the chapel, separated from the rest of the church by a scenic arch, functions as a "proscenium" upon which the representations of the deceased members of the Cornaro family participate in the saint's "*unio mystico*."²⁸⁵ Bernini treats the altar of the Ecstasy of St. Teresa as a permanent *apparato* incorporating many of the same illusionistic and scenographic devices found in Menghini and Rainaldi's contemporary *apparati* for the *Quarant'ore* devotions held in the Gesù.²⁸⁶

²⁸³ See M.S. WEIL, "The Relationship of the Cornaro Chapel to Mystery Plays and Italian Court Theatre," in Wisch and Munshower, eds., "*All the world's a stage ...*", pp. 458-486.

²⁸⁴ NOEHLES, "Altari scenografici," p. 161.

²⁸⁵ IBID., p. 162.

²⁸⁶ BJURSTRÖM, "Baroque Theater," p. 107.

Bernini also designed the *Cathedra Petri* in St. Peter's as a permanent throne in the form of an *apparato* for the *Quarant'ore* devotion, but with the throne of St. Peter exposed in place of the Eucharistic Host. Sculptural figures of putti, clouds, and rays of light spill out beyond the frame as they do in the temporary decoration. Likewise, raking light and back lighting is used to create an ambiguity between real and represented light in the same manner as it is in temporary decoration.

Bernini and Cortona's designs exerted a lasting influence on subsequent designs for scenic chapels in Rome and beyond.²⁸⁷ Carlo Fontana's Cappella dell'Assunta in the Collegio Clementino in Rome (1685-87), for example, is illuminated by concealed windows flanking the altar in the manner of Bernini's Raimondi and Cornaro Chapels and Cortona's project for the high altar in San Giovanni dei Fiorentini.²⁸⁸ The same is true of Fontana's Cappella Cybo in Santa Maria del Popolo in Rome (1682-84).²⁸⁹ Likewise, in several of his preliminary designs for the Cappella Albani in San Sebastiano fuori le Mura in Rome (1706-12), Fontana illuminated the altar by means of lateral windows positioned beyond the sight lines of the spectator.²⁹⁰ In both the Cappella Cybo and the Cappella Albani, Fontana framed and fixed the spectator's field of vision on the altar by means of flanking columns and other

²⁸⁷ See H. HAGER, "Un riesame di tre cappelle di Carlo Fontana a Roma," *Commentari* XXVII:3-4 (1976), pp. 252-289.

²⁸⁸ *IBID.*, p. 262, fig. 11.

²⁸⁹ See *IDEM.*, "La cappella del Cardinale Alderano Cybo in Santa Maria del Popolo," *Commentari* XXV:1-2 (1974), pp. 47-61; and *IDEM.*, "Un riesame," p. 274, fig. 27.

²⁹⁰ *IBID.*, pp. 271-273, figs. 23-25.

elements.²⁹¹ In a similar manner, Fontana framed the views of the high altars of Santo Spirito dei Napolitani and Santa Maria dei Miracoli in Rome (1677).²⁹²

Vittone's Designs

Vittone himself designed a permanent architecture that, in its overall form and constituent parts, was greatly influenced by temporary decoration. Vittone's attitude on the matter is revealed in a passage from *Istruzioni diverse* in which he states that fountains should appear animated in form, in the manner of fireworks machines, and be covered with ornament that is symbolic of the fabulous or historical events for which reason they were commissioned.²⁹³ Thus not only does Vittone consider the fountain, a permanent structure typically fashioned out of stone, to be akin to a temporary decoration, but he specifically stipulates that designs for fountains are to be regulated by the same formal and allegorical norms as those that regulate temporary fabrications.

²⁹¹ IDEM., "Johann Dientzenhofer's Cathedral in Fulda and the Question of Its Roman Origins," in Hager and Munshower, eds., *Light on the Eternal City*, pp. 188-229, here p. 197, fig. 153.

²⁹² IBID., pp. 196-197, 221, fig. 149. On the altar of Santo Spirito dei Napolitani, see BRAHAM/HAGER, *Carlo Fontana*, p. 76, no. 124, pl. 100. On the altar of Santa Maria dei Miracoli, see H. HAGER, "Zur Planungs-und Baugeschichte der Zwillingskirchen auf der Piazza del Popolo: S. Maria di Monte Santo und Santa Maria dei Miracoli in Rom," *Römisches Jahrbuch für Kunstgeschichte* XI (1967-68), pp. 189-311, here p. 251, note 131, pp. 274-277, pl. 199.

²⁹³ VITTORE, *Istruzioni diverse*, p. 165: "Vogliono tali sorta di Fabbriche, o Macchine, siccome già qui avanti si è, delle Fontane trattandosi, accennato, esser nella composizione loro maneggiate in guisa, che si scorga in quello, che alla vista di se presentano, un certo che, per cui animate compajano, e dimostranti sotto le specie de' proprj loro ornamenti un qualche concetto o favoloso, od istorico, che rapporto abbia, od allusione al fatto o sia caso, per cui prodotte rispettivamente vengono tali Macchine." See also FAGIOLO, "L'universo," p. 135.

Vittone designed a project for a fountain in an urban square that he describes and illustrates in *Istruzioni diverse* (Figure 3.48).²⁹⁴ It is not known when he designed it but it likely dates to his student years in Rome.²⁹⁵ Vittone tells us that he desired its ornament to depict some well-known story or fable in such a fashion that the eye is guided to appreciate the core of the complex as well as its composite parts.²⁹⁶ Vittone specifies that his fountain is to stand in the middle of a large urban square.²⁹⁷ It is comprised of two concentric pools, an inner one that is higher and narrower than the outer one.²⁹⁸ From the center of the inner pool rises a rock from which a stream of water springs.²⁹⁹ At the extreme sides of the inner pool there are four blocks upon each one of which a triton is seated spurting water that falls back into the

²⁹⁴ VITTONI, *Istruzioni diverse*, pp. 163-164, pl. 35. On Vittone's fountain project, see OLIVERO, *Le opere*, p. 69; PORTOGHESI, *Bernardo Vittone*, p. 15, fig. V; FAGIOLO, "L'universo," p. 135, fig. 9; TAVASSI LA GRECA, *Bernardo Antonio Vittone*, p. 21; and IDEM., "«Decorazione»," p. 184.

²⁹⁵ OLIVERO, *Le opere*, p. 69, suggests that Vittone's fountain was an academic project inspired by Bernini's Four Rivers Fountain in the Piazza Navona.

²⁹⁶ VITTONI, *Istruzioni diverse*, pp. 163-164: "Sul riflesso, che vogliono gli ornamenti inservienti a decorare tali di sorta di Fabbriche esser tuttora espressivi di cosa, che abbia in se in qualche modo del significativo, alludendo ad istoria, o favola alcuna, la quale si nota, o n'abbia almeno in alcuna maniera l'apparenza; cosi che possa in un col diletto, che l'occhio ne prende, andar l'intelletto ancora de' Riquardanti del pascolo gustando, che recare a lui suole l'incontrare oggetto, che di trattenimento gli sia per ciò, che rappresenta, col dare a lui motivo d'andarsi esercitando in considerazioni dirette a rintracciare lo scopo, a cui mira il complesso, e la disposizione delle parti, che tale oggetto compongono; cosa, che per l'ordinario suole a lui essere di non poco appagamento, e piacere; ho pertanto, per animare anch' io in tal modo il presente esempio, in simil termini l'idea concepito di questo Edificio." See also CAVALLARI MURAT, "Aggiornamento," p. 511; FAGIOLO, "L'universo," p. 134; and TAVASSI LA GRECA, "«Decorazione»," p. 181.

²⁹⁷ VITTONI, *Istruzioni diverse*, p. 164: "Rappresentasi qui dunque una Fontana da formarsi nel mezzo d'una gran Piazza, la quale trovisi in una Città."

²⁹⁸ IBID., p. 164: "Formano, come si vede, questa Fontana due gran Vasche graziosamente contornate, e concentriche."

²⁹⁹ IBID., p. 164: "Dal mezzo dell' interiore, e più piccola, che a più alto piano esiste dell' altra, risalta uno scoglio, su cui vedesi per una parte una vena d'acqua, che zampilla; un' altra per altra parte, che giù va cascando, e riscando per esso scoglio."

pool.³⁰⁰ Water from the inner pool flows into the outer pool by means of spouts nicely decorated with Lion's mustaches.³⁰¹ The fountain takes as its theme *The Passage of Time*, conveyed by the Salomonic column that rises from the center of the rock and intended to serve as the stylus of a sundial, and by statues of nymphs, representing the hours of the day, scattered all around the rock.³⁰² The fountain project was thereby intended to function as a solar clock.³⁰³ Vittone explains that the nymphs are not depicted nude, but clothed in light garments to indicate the fleeting swiftness of time.³⁰⁴ The transitory nature of time is also indicated, he tells us, by the three figures representing three of the astrological signs of the Zodiac — Aries the Ram, Cancer the Crab, and Leo the Lion — to mark, together with the nine nymphs, the conventional division of time into twelve parts, namely the hours of the day and the months of the year.³⁰⁵ It is significant that the theme of Vittone's fountain, *The Passage*

³⁰⁰ IBID., p. 164: "Alle quattro estremità di mezzo della Vasca interiore medesima risaltano altri quattro pezzi di scoglio, su ciascuno dei quali assiso stassi un Tritone, che in aria getta dell' acqua, la quale ricadendo in essa Vasca..."

³⁰¹ IBID., p. 164: "...si va indi, in un con quella, che giù cade dallo scoglio di mezzo, per diversi fori nel di lei bordo aperti, ed ornati di mostacci di Leone, nella seconda Vasca scaricando."

³⁰² IBID., p. 164: "Sul mezzo di detto scoglio s' eleva un' alta colonna destinata a servire di stilo per un Orologgio, o sia Quadrante Orizzontale da formarsi secondo le regole dell' Arte sul piano della Piazza oltre bordo della Vasca esteriore. Distribuite in oltre sonosi attorno al detto scoglio per maggior ornamento di questa Fontana, quale Ninfe in diversi cori divise, varie Donne rappresentanti le Ore del giorno..."

³⁰³ FAGIOLO, "L'universo," p. 135.

³⁰⁴ VITTONI, *Istruzioni diverse*, p. 164: "...tali dimostrandole non tanto la nudità, e leggerezza dell' abbigliamento, in cui disposte vi si sono per alludere alla fugacità, e leggerezza del tempo, di cui elle son figlie..."

³⁰⁵ IBID., p. 164: "quanto anche que' tre celesti Animali, l'Ariete, il Granchio, ed il Leone, che espressi vi si veggono, come segni, ch' eglino parimente sono di tempo; e di tempo massimamente diviso in parti dodici, a somiglianza delle divisioni, che del medesimo fanno gli Orologj a macchina, e quali anticamente già erano quelle, in cui li giorni non meno, che le notti ancora dividevanti. Il resto non è, che semplice ornamento quivi aggiunto non ad altro fine, che per apportare più nobil vista, e più fastosa, e vaga ricchezza alla Carta." See also FAGIOLO, "L'universo," p. 135.

of Time, with its unmistakable allusion to transience, is conveyed not by a temporary decoration but by a permanent one. Such a theme was perhaps suggested and justified by the amorphous nature of water itself as it flows through and across the fountain. Fagiolo, who interprets Vittone's fountain project as a "theater of water," notes that the sinuous contour of the Salomonic column suggests the fluid character of an aquatic element.³⁰⁶

Vittone also designed permanent altars that take their forms from temporary decorations. It was as a student in Rome, while sequestered in Cardinal Albani's library, that Vittone assiduously copied Carlo Fontana's scenographic designs for the Cappella Cybo and the Cappella Albani which owe much to the example of temporary *apparati*.³⁰⁷ Even before he enrolled in the Accademia in Rome, Vittone had designed the high altar for the Jesuit Sanctuary of Sant'Ignazio near Lanzo (1725-27) to commemorate the site where an apparition of St. Ignatius of Loyola had miraculously appeared in 1629. It is illustrated on plate 93 of *Istruzioni diverse*, and bears early witness to Vittone's taste for religious spectacle (Figure 1.1).³⁰⁸ The altar is represented as a rocky mass upon which the saint stands, flanked by candelabras, looking upward to a glory of cherubs and rays of light emanating from the monogram for the Name of Jesus, IHS. Vittone explains that the altar was positioned in the middle of the church in order to represent St. Ignatius in the same fashion as he had originally appeared on the mountain near Lanzo.³⁰⁹

³⁰⁶ IBID., p. 135.

³⁰⁷ See HAGER, "Un riesame," pp. 271-273, figs. 23-25.

³⁰⁸ VITTONI, *Istruzioni diverse*, pp. 194-195, pl. 93 (left figure). On Vittone's original drawing in the Musée des Arts Décoratifs (I, no. 38), see WITTKOWER, "Vittone's Drawings," fig. 8; and CARBONERI/VIALE, eds., *Bernardo Vittone*, fig. 1.

Vittone also designed an altar that he illustrates at the bottom of plate 89 of *Istruzioni diverse*.³¹⁰ The design is undated, but its representation in the shape of a sacrificial vessel finds close a parallel to Vittone's main altars that he executed for the confraternity church of Santa Croce at Caramagna (1736) and the Sanctuary of the Visitazione at Vallinotto (1738-39).³¹¹

Vittone designed still other altars and tabernacles whose forms closely resemble those of temporary *apparati* for the *Quarant'ore* devotion. Indeed, Vittone's manner for designing altars and tabernacles, as he tells it in his treatise, is very similar to his manner for designing stage sets for the sacred theater. Vittone tells us that the principal consideration in forming an altar, is that its design should be adapted to the place where it is intended to stand, that its dimensions be proportionate to the church, and that it be positioned in such a way that both its appearance and function are enhanced.³¹² For this reason, it is convenient to take into account not so much the spaciousness of

³⁰⁹ VITTORE, *Istruzioni diverse*, p. 194: "...allorquando le dette Imagini, o Statue unire si debbono al corpo stesso dell' Altare. La prima di tali idee è quella dell' Altare del celebre Santuario di S. Ignazio di Lojola, esistente in vicinanza del Luogo di Lanzo, sul monte, ove seguì la ben nota apparizione d'esso Santo. Si è pertanto stimato di rappresentarlo sul sasso stesso del Monte sul modo, che egli vi apparse, talmente che ne viene la Figura, in un coll' Altare, che è doppio, a trovarsi isolata nel mezzo della Chiesa..."

³¹⁰ IBID., pp. 192-193, pl. 89 (bottom figure).

³¹¹ According to PORTOGHESI, *Bernardo Vittone*, pp. 99, 219, pls. 76-77, the altars are shaped like a sacrificial amphora to symbolize the Virgin in her capacity as *vas spirituale*. Vittone's altar for the church at Caramagna was erected by Giovanni Domenico Giudice after Vittone's design. The *trompe l'oeil* fresco on the back wall depicting an architectural perspective (1735) was painted by Giuseppe Pietro Dallamano, a *quadraturista* whose skill Vittone singles out for praise in *Istruzioni elementari* (p. 528). See G. GALLO, *Storia di Caramagna Piemonte* (Turin, 1928); G. GALLO and B. GALLO, "La chiesa dell'arciconfraternità di S. Croce in Caramagna, Piemonte," *Bollettino Deputazione Subalpina di Storia Patria, Sezione di Cuneo* XIII:20 (1941), pp. 29-39; CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 28, no. 16, and p. 57, no. 138; CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 19, no. 18, fig. 18; and PROLA/PEYROT, *Architetture Barocche*, un-numbered page [listed under Caramagna Piemonte].

³¹² VITTORE, *Istruzioni diverse*, p. 192: "Un' avvertenza, che principalmente avere si debbe nelle formazione di tali Altari, si è d'adattargli al luogo, ove hanno a collocarsi; la grandezza proporzionandone a quella della Chiesa, e disponendoli in maniera, che nobile di se rendano a chi sta in Chiesa, e maestoso aspetto."

the site where the altar is to be erected, as the distance from the principal point whence it is to be seen.³¹³ Moreover, care must be taken to position the altar in such a way that the candelabras and other ornaments do not conceal it from the sight of those standing in the church.³¹⁴ In all of these considerations — that it be suitably positioned and proportioned with respect to the church, and that it be clearly visible to those who would see it — the altar is subject to the same norms of design as those that, in accordance with Vittone's stipulation, regulate the *apparato* for the *Quarant'ore* devotion.

Vittone's designs for permanent altars, tabernacles, and thrones include many of the same features — crowns, candelabras, and radiant glories — as those that he incorporates in his designs for temporary *apparati* for the *Quarant'ore* devotion. Vittone illustrates three such designs for altars on plate 90 of *Istruzioni diverse*. The altar to the left of the plate combines both real and fictive illumination to highlight the central scene of the Crucifixion of Christ.³¹⁵ The altar in the center features a glory centered on a radiant delta, symbol of the Holy Trinity.³¹⁶ It is a version of the altar project that Vittone was to later draw up for San Francesco d'Assisi in Turin (1767; Figure 3.60).

³¹³ IBID., p. 192: "Perlochè conviene aver riguardo non tanto all' ampiezza del sito, in cui debbono elevarsi; che alla distanza, che questo ha dal principal punto, onde hanno a vedersi; maggiore dandogli a tale effetto, ovver minore l'elevazione secondo la maggiore, ovvero minore lunghezza della Chiesa; così che possa egli presso almen che intieramente dal Vaso di mezzo della Chiesa scuoprirsi, e 'l Sacerdote vedersi, che vi sta celebrando."

³¹⁴ IBID., p. 194: "L'avvertenza, che aver si debbe nel collocarle, si è che si trovino in altezza tale, che coperte non restino da' Candeglieri, che disposti vengono sovra il gradino principale dell' Altare, a chi sta nel centro del vaso della Chiesa; sì che possansi quindi nell' intierezza loro godere."

³¹⁵ OLIVERO, *Le opere*, p. 73.

³¹⁶ IBID., p. 73.

Finally, the altar to the right is similar to the first two, but capped by a crown like those that cap Vittone's designs for *apparati* for the *Quarant'ore* devotion.

Vittone publishes his ideas for tabernacles, thrones, and other similar furnishings on various plates of *Istruzioni diverse*. The first of these is plate 94, on which three such designs appear (Figure 3.50).³¹⁷ The first design, to the left of the plate, represents a sepulchre on Holy Thursday.³¹⁸ It depicts a scene of the Scourged Christ positioned directly below the figures of God the Father and the Dove of the Holy Spirit from which emanates a brilliant glory of luminous rays, billowing clouds, and cherubs in the manner of similar glories depicted in *apparati* for the *Quarant'ore* devotion.³¹⁹ Its funereal character is underscored by the presence of five candelabras arranged in a manner as to suggest a catafalque. The second design, in the center of the plate, is for a tabernacle which would be perfect, in Vittone's opinion, to display the figure of a titular saint.³²⁰ The third design, to the right of the plate, is an idea for a throne to display the Holiest Sacrament.³²¹

³¹⁷ IBID., p. 73; CAVALLARI MURAT, "Aggiornamento," fig. 25. Vittone modeled the first and second of these designs directly after Juvarra's altar of the Annunciation in the Superga (1728). On Juvarra's altar, see DARDANELLO, "Altari piemontesi," pl. 57 (lower left figure).

³¹⁸ VITTORE, *Istruzioni diverse*, p. 195: "Varie idee di Tabernacoli, e Troni, ed altri consimili Arredi da collocarsi sopra gli Altari as uso di Esposizioni rappresentansi nelle Tavole 94, 95., 96., e 97. La prima delle tre, che si contengono nella Tav. 94., servir potrebbe per rappresentare un Sepolcro il Giovedì Santo."

³¹⁹ A related "sepulchre," perhaps intended as part of an *apparato* for the *Quarant'ore* devotion to be celebrated during Holy Week, is also suggested by Vittone's study, recorded on a sheet in the Musée des Arts Décoratifs in Paris, of a crucifix situated on a mound of stones with an arched opening; see CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 34, no. 77, fig. 140.

³²⁰ VITTORE, *Istruzioni diverse*, p. 195: "La seconda è un Tabernacolo, che ben potrebbe venir in acconcio per esporre in venerazione sopra l'Altare principale la figura d'un Santo Tutelare."

³²¹ IBID., p. 195: "E le terza l'idea d'un Trono inserviente per l'Esposizione del Santissimo Sacramento."

On plate 95 Vittone illustrates two designs for fixed tabernacles intended, he tells us, to adorn permanent altars.³²² The one to the left of the plate portrays the Christ Child with a radiant nimbus and upraised right arm supported by two kneeling angels (Figure 3.51).³²³ The one to the right is again flanked by figures of kneeling angels, and capped by a crown (Figure 3.52). Vittone illustrates three more designs on plate 96.³²⁴ They are for tabernacles and thrones to display the Holy Sacrament that are either fixed or moveable depending on the material out of which they are fabricated.³²⁵ The one to the right of the plate is capped by a crown supported by cherubs and depicts the Dove of the Holy Spirit surrounded by a radiant glory (Figure 3.53). The throne in the center of the plate also is capped by a crown (Figure 3.54). On plate 97 Vittone illustrates his designs for moveable thrones to be used on occasions of special solemnities.³²⁶ All three designs are capped by crowns and equipped with brilliant glories centered on the Dove of the Holy

³²² IBID., p. 195: "Le due, che rapportate veggonsi nella Tav. 95, sono idee di Tabernacoli destinati ad ornare un Altare, su cui debbano restar fissi per di lui compimento." See also FAGIOLO, "L'universo," p. 136, note 4. Both engravings are based on drawings in the Musée des Art Décoratifs which, unlike the engravings, depict the complete altar; see WITTKOWER, "Vittone's Drawings," p. 172, figs. 14-15.

³²³ VITTORE, *Istruzioni diverse*, pl. 95 (left figure). See FAGIOLO, "L'universo," p. 136, note 5, fig. 33. Vittone's design was clearly derived from Juvarra's altar of San Giuseppe in Santa Teresa in Turin (1735). On Juvarra's altar, see TELLUCCINI, *L'arte dell'architetto*, pp. 62, 63 (top figure), pl. 27; CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 52, no. 114, pls. 119-120; VIALE, ed., *Mostra di Filippo Juvarra*, figs. 209-210; and CAVALLARI MURAT, "Juvarra e Massari, tra neoguariniani e neopalladiani," *Atti e rassegna tecnica della Società degli Architetti di Torino* n.s. XXI:6 (June 1967), pp. 161-174, here p. 169, and the figure on p. 166.

³²⁴ VITTORE, *Istruzioni diverse*, pl. 96. See also FAGIOLO, "L'universo," p. 136, note 1.

³²⁵ VITTORE, *Istruzioni diverse*, pp. 195-196: "Le tre, che in seguito vengono nella Tav. 96., sono idee, che servir possono per la formazione di Tabernacoli, e Troni, il cui uso abbia ad essere per l'Esposizione del Santissimo Sacramento, e che abbiano a restar fissi, od amovibili, secondo la specie della materia, di cui si vorranno costrutte."

³²⁶ IBID., p. 196: "Le rimanenti, che espresse vanno nella Tav. 97., tutte sono idee di Troni amovibili, da adoprarli medesimamente per l'Esposizione del Santissimo Sacramento in occasione di solennità, e d'apparati." See also FAGIOLO, "L'universo," p. 136, note 1.

Spirit or else cherubs (Figure 3.55). Once again, the crowns and the glories are comparable to those depicted in Vittone's designs for an *apparato* for the *Quarant'ore* devotion. Indeed, it is on the very following page, plate 98, that Vittone illustrates the first of his two designs for an *apparato* for the *Quarant'ore* devotion, underscoring thereby the functional and formal connections between such *apparati* and tabernacles, the one transient in nature and the other permanent.

Vittone incorporated both the crown and the celestial glory also in a number of other altar designs. For example, his unexecuted projects for Santa Chiara at Alessandria (Figure 4.49) and chapel in the Annunziata in Turin (1749; Figure 3.56),³²⁷ his chapel of the Madonna delle Grazie in the Cathedral at Chieri (1757-59; Figure 3.57),³²⁸ and his chapel in the Certosa of the Valle di Pesio (Figure 3.58), are all capped by a suspended crown.³²⁹ The celestial glory of luminous rays, clouds, and cherubs is to be found in still other altar designs by Vittone, including one for a project for a chapel of the Addolorata showing the Deposition (Figure 3.59).³³⁰ The glory is centered on the Cross

³²⁷ Signed "Ing. Bernardo Vittone, Agosti, li 15, 1749." See OLIVERO, *Le opere*, pp. 73, 107-108; CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 60, no. 153; and PORTOGHESI, *Bernardo Vittone*, pl. 17.

³²⁸ E. OLIVERO, "La Cappella della B.V. delle Grazie nel Duomo di Chieri," *Bollettino della Società Piemontese di Archeologia e Belle Arti* VIII:1-2 (January-June 1924), pp. 16-19, pls. VII-VIII; CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 61, no. 162, pl. 150-b; PORTOGHESI, *Bernardo Vittone*, pp. 155, 227, pls. 39, 242-245; CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 32, no. 71, fig. 130; CAVALLARI MURAT, "Aggiornamento," p. 530.

³²⁹ The drawing is entitled "Elevazione dell'Altare Maggiore della Certosa della Valle di Pesio" and signed "Ing.re Bernardo Vittone." Vittone's altar was removed and dismantled during the Napoleonic occupation, and was partially reconstructed in a chapel in the cathedral of Cuneo. See CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 37, no. 96, fig. 153; and PORTOGHESI, *Bernardo Vittone*, p. 156, pl. 277.

³³⁰ Signed "Ing.re Bernardo Vittone," cited in CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 32, no. 72, fig. 131.

held aloft by an angel hovering above the figure of the Deposed Christ. Vittone's two side altar projects for San Francesco d'Assisi in Turin (1767) also feature glories, one of them centered on a radiant delta (Figure 3.60) in a variation on a design illustrated in *Istruzioni diverse*, and the other centered on the Dove of the Holy Spirit (Figure 3.61).³³¹ Both altar projects feature a central painting of a saint who is depicted by Vittone as being showered by rays of light emerging through and around clouds and cherubs from on high. Finally, the high altar of the Sanctuary of Vicoforte Mondovì, the "Sacro Pilone," begun by Gallo (1749) and completed by Vittone after Gallo's design (1750-51), gives to the central space in which it stands a splendidly articulated Baroque 'ariosa macchina' ultimately inspired by the altar and *apparato* designs of Andrea Pozzo.³³²

Not only Vittone's altars, but also his openwork churches owe much to the example of temporary decorations, with the Visitazione at Vallinotto and Santa Chiara at Bra among the most "ephemeral" and "scenographic" of his church designs. Indeed, in their incorporation of perforated vaults and pendentives, Vittone's openwork church designs bear a close resemblance to stage sets, and in particular to many of Juvarra's stage sets. It is to Vittone's openwork church designs that we now turn.

³³¹ VITTONI, *Istruzioni diverse*, pl. 90 (center figure). See also OLIVERO, *Le opere*, p. 73; IDEM., *La chiesa di S. Francesco d'Assisi in Torino e le sue opere d'arte* (Chieri, 1935), pl. 21; CARBONERI, "Architettura," in *Mostra del Barocco*, I, pp. 62-63, nos. 166-167, pls. 157-a, 157-b; PORTOGHESI, *Bernardo Vittone*, p. 156, pls. 280-281; CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 36, no. 92, figs. 149-150; and U. BERTAGNA, "Disegni e documenti inediti per Bernardo Antonio Vittone," in Canavesio, ed., *Il voluttuoso genio dell'occhio*, pp. 187-198, here pp. 189-193, fig. 7.

³³² CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 42, no. 70, pl. 59. See also IDEM., *L'architetto Francesco Gallo*, p. 156; and V. COMOLI and L. PALMUCCI, eds., *Francesco Gallo 1672-1750: Un architetto ingegnere tra stato e provincia* (Turin, 2000), p. 116, note 9 on p. 119, pp. 266, 269.

CHAPTER FOUR

VITTONONE'S DESIGNS FOR THE OPENWORK DOME

The Interlaced Ribbed Lattice

Background and Precedent

The interlaced ribbed dome in Piedmont has its origins in the early twelfth century with the erection of the narthex vault in the Cathedral of Sant'Evasio at Casale Monferrato (Figure 4.1).¹ It is comprised of four masonry ribs, two running parallel along the longitudinal axis of the church and two running parallel along the transverse axis, both pairs of ribs intersecting one another at 90-degree angles to form a criss-cross configuration.² The orthogonal intersection of ribs divides the entire vault into nine rectangular compartments, each capped by its own groin or barrel vault. The ribs form a skeletal structure allowing for the insertion of windows into the upper reaches of the narthex walls, even as the vault itself remains solid and closed.

The first interlaced ribbed domes in Piedmont to be erected as true openwork lattices date to the mid-seventeenth century. They are the celebrated creations of Guarino Guarini (1624-83), a Theatine priest,

¹ The narthex was completed before 1107 when the church was consecrated; see GABRIELLI, *L'arte a Casale*, pp. 9-10, fig. 2; TORNIELLI, *Architetture di otto secoli*, pp. 47-49, pls. XII-XIII; and VIALE FERRERO, *Ritratto di Casale*, p. 9, pl. I. On Sant'Evasio see also N. GABRIELLI, "Appunti sulle strutture romaniche della cattedrale di Sant'Evasio in Casale Monferrato," in *Quarto congresso di antichità e d'arte* (Turin, 1974), pp. 253-258; and P. VERZONE, "Saint-Evasio de Casal Monferrat," in *Congrès Archéologique du Piémont* (Paris, 1977), pp. 298-314.

² The Sant'Evasio narthex vault closely resembles the interlaced ribbed vaults of certain medieval churches and mosques in Spain and churches in Armenia; see GABRIELLI, *L'arte a Casale*, p. 9; and TORNIELLI, *Architetture di otto secoli*, p. 48.

theologian, mathematician, and architect who arrived in Turin in late 1666 and remained there until his death. It is reasonably certain that Guarini was familiar with the Sant'Evasio narthex vault since Casale Monferrato, situated only 40 miles east of Turin, was the intended site of his unexecuted project for San Filippo Neri (1667). Portoghesi in fact has advanced the hypothesis that the Sant'Evasio vault was the immediate source of inspiration for Guarini's interlaced ribbed domes.³ Any such formative influence is unlikely, however, since, as Antonio Terzaghi observes, Guarini had already designed an interlaced ribbed dome in 1662 for Sainte-Anne-la-Royale in Paris several years before he arrived in Piedmont.⁴ Moreover, Guarini's domes differ from the Sant'Evasio vault in a number of significant ways. In the first place, Guarini's domes are open, light, aerial cages, the webbing of which has been severely eroded and perforated in contrast to the Sant'Evasio vault, which is a closed, heavy, and solid structure, the webbing of which is fully intact. In the second place, the ribs of Guarini's domes spring from polygonal and circular bases of support to form complex star-shaped intersections in contrast to the ribs of the Sant'Evasio vault which spring from a rectangular base to form simple orthogonal intersections. In this respect, Guarini's domes bear a closer resemblance to the intersecting ribbed domes devised by Leonardo da Vinci at

³ P. PORTOGHESI, *Guarino Guarini* (Milan, 1956), p. 10.

⁴ A. TERZAGHI, "Origini e sviluppo della cupola ad arconi intrecciati nell'architettura barocca del Piemonte," in *Atti del X Congresso*, pp. 370-379, here p. 370. Guarini is not known to have visited Piedmont prior to his arrival there from Paris in December 1666. Still, Terzaghi does not exclude the possibility that Guarini could have visited Casale Monferrato and seen the Sant'Evasio vault on an unknown, and as yet undocumented, visit to Piedmont prior to 1662, especially since Guarini's whereabouts between 1658 and 1659 have yet to be accounted for, and since Guarini is known in 1656 to have worked in Guastalla and Parma in the region of Lombardy, not far from Piedmont; see also BRAYDA/COLI/SESIA, "Ingegneri," p. 113; and CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 31.

the end of the fifteenth century, a resemblance that has led Anthony Blunt to suggest that Guarini was influenced by Leonardo's designs.⁵

There are other interlaced ribbed vaults in northern Italy which Guarini would have seen during the years of his youth and early practice, and which may have kindled his interest in interlaced ribs. In Mantua, not far from Guarini's birthplace of Modena, there is Gian Battista Bertano's interlaced ribbed vault in the church of Santa Barbara (1563; Figure 4.2).⁶ And in Verona, the city in which the main branch of the Guarini family resided, there is Lelio Pellesina's interlaced ribbed vault in the rebuilt presbytery of San Nicolò (1627), a vault which was certainly known to Guarini since it spans the very presbytery for which he would later design a tabernacle.⁷ The ribs of Bertano and Pellesina's vaults form orthogonal intersections in variations on the Sant'Evasio narthex vault in Casale Monferrato.⁸ Unlike the ribs of the

⁵ A. BLUNT, "Guarini and Leonardo," *The Architectural Review* CXLVII:876 (February 1970), pp. 164-166. Still, it is not clear when Guarini would have seen Leonardo's drawings, for although Guarini is known to have worked in Lombardy during the mid-1650s, the actual whereabouts of Leonardo's sheets during Guarini's lifetime are uncertain and have yet to be established. See the reply to Blunt by R. MAINSTONE, "Guarini and Leonardo," *The Architectural Review* CXLVII:880 (June 1970), p. 454. See also E.C. ROBISON, "Optics and Mathematics in the Domed Churches of Guarino Guarini," *Journal of the Society of Architectural Historians* L:4 (December 1991), pp. 384-401, here p. 391, note 19, who, while not ruling out the possibility of Guarini having known Leonardo's drawings, points out "that any architect sketching out centralized spaces with eight subsidiary elements is likely to draw such a diagram," and that Guarini may well have generated his solution of the interlaced ribbed dome independently of any precedent.

⁶ See TERZAGHI, "Origini," p. 370, fig. 1, who posits a link between Bertano and Guarini's interlaced ribbed vaults. Bertano was a pupil of Giulio Romano whose own criss-crossed ribbed vault in the Palazzo Ducale in Mantua may have suggested to Bertano his scheme.

⁷ See P. PORTOGHESI, "Schede guariniane: Il tabernacolo guariniano dell'altare maggiore di S. Nicolò a Verona," *Quaderni dell'Istituto di Storia dell'Architettura* no. 17 (1956), pp. 16-20, pl. 1.

⁸ Guarini's production of interlaced ribbed domes would appear to have occurred entirely within the tradition of similar vault construction in Italy. However, many scholars have concluded that Guarini was heavily influenced by the Islamic and medieval interlaced ribbed vaults at Cordoba, Saragossa, Salamanca, Seville, and other sites in Spain. For a discussion of possible Iberian and Islamic influences on Guarini's designs for interlaced ribbed domes, and a summary of the literature on the subject, see TERZAGHI, "Origini," p. 369, notes 1-4 on p.

Sant'Evasio vault, however, they are not thick structural supports but flat decorative bands.

In Rome there are also Francesco Borromini's basket vaults which Guarini would have assuredly seen during the years of his novitiate there in the Theatine Order (1639-47).⁹ The earliest of Borromini's basket vaults, for the Oratory of the Filippini (1637-40), was completed just one year after Guarini began his novitiate, while the latest, for the Re Magi Chapel in the Collegio di Propaganda Fide (1646-62), was commissioned as part of a larger Jesuit complex the year before Guarini completed his novitiate and departed Rome (although construction of the chapel itself did not occur until 1662-64).¹⁰ Whereas the former vault is a tentative, unsure essay in which the interlacing of the ribs is restricted to the corner segments of the vault, the latter vault is an accomplished, masterful essay in which the interlaced ribs are made to sweep

377; TAMBURINI, *Le chiese*, pp. 205-205, note 16; A. FLORENSA, "Guarini e il modo islamico," in V. Viale, ed., *Guarino Guarini e l'internazionalità del Barocco*, 2 vols. (Turin, 1970), I, pp. 637-665; P. VERZONE, "Struttura delle cupole del Guarini," in V. Viale, ed., *Guarino Guarini e l'internazionalità del Barocco*, 2 vols. (Turin, 1970), I, pp. 401-413; J.A. RAMÍREZ, "Guarino Guarini, Fray Juan Ricci, and the 'Complete Salomonic Order,'" *Art History* IV:2 (June 1981), pp. 175-185; MEEK, *Guarino Guarini*, pp. 12-13, 52-53, 155; and ROBISON, "Optics," p. 384, note 4, p. 391, note 19.

⁹ See PORTOGHESI, *Rome of Borromini*, p. 286, pls. 380 (left and right), 386 (left and right), who suggests that Borromini's basket vaults were inspired by the architect's youthful memory of late medieval and early Renaissance interlaced ribbed vaults in northern Italy, including the early sixteenth-century vault of San Maurizio al Monastero Maggiore in Milan (a vault that Borromini could easily have seen during his stay of several years in that city prior to his arrival in Rome in 1619) and the sixteenth-century vault in the Palazzo Ducale in Mantua by Giulio Romano (the same vault which, as noted above, appears to have been a source of inspiration for Bertano's Santa Barbara vault).

¹⁰ Borromini may have designed additional basket vaults during the years of Guarini's novitiate. For example, the nave of Borromini's project for the reconstruction of San Giovanni in Laterano (1646-49) appears to have been originally designed with a basket vault; see IBID., p. 286. Likewise, Borromini's original design for Santa Maria dei Sette Dolori (begun 1642-43 and left unfinished in 1646) may have called for a basket vault, although this is far from certain since the original construction stopped before Borromini could begin the vault and no record of Borromini's original intention has survived. The painted representation of tightly woven interlaced ribs presently affixed to the intrados of the nave vault dates to restorations of 1845 and 1928-29 and cannot be taken to correspond to Borromini's original design; see WITTKOWER, *Art and Architecture*, p. 530, note 33.

the entire vault (Figure 4.3). The ribs of both vaults are broad flat bands like those of Bertano and Pellesina's vaults, but instead of springing vertically from the supporting piers they spring diagonally at 45 degree angles to form "a criss-crossing pattern that forces one to see the room aerially, across the space instead of around the walls."¹¹ In this manner Borromini endowed the rather low and flat vaults with the illusion of greater height and steeper curvature than they actually have. It undoubtedly was this property of Borromini's basket vaults to optically expand small, close spaces that commended them to Guarini.

Indeed, Guarini's interlaced ribbed domes are themselves characterized by a pronounced illusionism deeply indebted to the example of Borromini's basket vaults, a debt manifest already in Guarini's earliest such dome, that of Sainte-Anne-la-Royale in Paris (1662-67, demolished 1823).¹² Begun the same year that construction on the Re Magi Chapel commenced, the Paris dome is in fact the most Borrominesque of Guarini's interlaced ribbed domes.¹³ Its

¹¹ POMMER, *Eighteenth-Century*, p. 5.

¹² The interconnection between the architecture of Guarini and Borromini has long been recognized with Vittone himself (*Istruzioni elementari*, p. 412) grouping Guarini and Borromini together as the "most licentious" of architects. See also S. BENEDETTI, "Guarini ed il barocco romano," in V. Viale, ed., *Guarino Guarini e l'internazionalità del Barocco*, 2 vols. (Turin, 1970), I, pp. 705-750.

¹³ Following his departure from Rome in 1647 upon the completion of his novitiate, Guarini briefly returned to the city in 1662 on his way from Messina to Paris, at which time he would have observed the Re Magi Chapel undergoing construction. It was during this latter visit to Rome that Guarini would have observed several other works, most notably Bernini's Colonnade of St. Peter's (begun 1656) and Cathedra Petri (1656-66), that had not yet been built during the years of his novitiate but which he specifically mentions in *Architettura civile*, pp. 246-247: "Chiaramente si conosce da un esempio: da che Papa Innocenzo X fece fare la Cattedra di S. Pietro dietro il tabernacolo di bronzo traforato fatta prima da Urbano; a quelli, i quali vi entrano in S. Pietro, quel tabernacolo non fa più sì pomposa e vaga vista di quello che faceva quando, isolato, non restava interrotto e confuso dall'architettura posteriore della Cattedra. Le colonne pur interne della gran piazza, che fece fare Papa Alessandro, sembrano confuse, se non si mirano dal centro." Guarini's visit to Rome in 1662 was his last documented visit to the Eternal City. However, it is very possible that, in his capacity as Padre Preposito, an office that charged him with the administrative oversight of architectural

depressed profile is much closer to the shallow sections of Borromini's vaults of the Oratory of the Filippini and Re Magi Chapel than to the steep lofty sections of Guarini's own later interlaced ribbed domes in Turin. Its relatively intact shell, pierced only by an oculus at the crown and by windows at the base, is again closer to the closed shells of Borromini's basket vaults than to the perforated cagework of Guarini's own later domes. Finally, its tightly woven cat's cradle of 16 interlaced ribs, the least structural and most decorative of Guarini's *oeuvre*, more closely resemble the flat bands of Borromini's basket vaults than they do the thick deep ribs of Guarini's own later domes. Still, Guarini's Paris dome differs from Borromini's basket vaults in two fundamental ways — it caps a centralized space and it is comprised of multiple, superimposed shells. It is precisely this predilection for centrality and the multiplication of shells that characterizes Guarini's mature domes, and that would later come to characterize Vittone's own domes as well.

Guarini writes that vaults are the principal part of architecture.¹⁴ However, in his judgment, they always appear flatter than they actually are, especially hemispherical domes whose upper third collects less light than does the base, resulting in a darkness that hides the curvature of the crown.¹⁵ It is therefore incumbent on the architect, Guarini contends, to counteract the resultant ocular deception and increase the apparent height of the vault by

production of the Theatine order, Guarini made subsequent undocumented trips to Rome; see ROBISON, "Optics," p. 384, note 2.

¹⁴ GUARINI, *Architettura civile*, Trattato III, capo 26, p. 277: "Le volte sono la principale parte delle fabbriche..."

¹⁵ IBID., Trattato III, capo 22, osservazione 11, p. 259: "...il Sole, che è tondo, par piano, ed i volti paiono sempre meno sveltì di quello sono, e massime le cupole di mezzo tondo, le quali dal terzo in su paiono piane, occupando una luce men chiara il loro fondo, e nascondendo la curvità, che in quel sito è poca."

altering its semi-circular profile.¹⁶ Now the profile of the interlaced ribbed dome of Sainte-Anne-la-Royale is itself a hemisphere — indeed, somewhat flatter than a hemisphere — that would have resulted in an ocular deception that, in accordance with Guarini's theory, must be counteracted. Guarini overcomes the difficulty by inserting a wide oculus into the crown for the purpose of eliminating the upper third of the shell altogether. The oculus opens to reveal a second domical shell above, a *cupolino*, slightly smaller and more brightly illuminated than the one below, surmounted in turn by a lantern. The contrast in illumination between the two shells was deliberately introduced to increase the apparent height of the dome since, again according to Guarini's theory, white objects appear larger than black ones,¹⁷ and more illuminated places or objects appear larger than dark ones.¹⁸ The vertical, telescopic stacking of similarly shaped, but successively reduced, domical shells produces a forced perspectival construction that, with the aid of repeated geometry and a calibrated gradation in luminosity, marvelously tricks the eye to counteract the optical distortions otherwise generated by the shape of the hemispherical vault.

It was in Piedmont that Guarini erected his most celebrated openwork domes, most notably those of the Theatine church of San Lorenzo (1666-87)

¹⁶ IBID., Trattato III, capo 22, osservazione 11, p. 259: "Però chi vorrà far volte svelte bisognerà non servirsi del semicircolo, ma farle come insegneremo abasso."

¹⁷ IBID., Trattato III, capo 21, osservazione 6, p. 245: "Gli oggetti che sono bianchi paiono più grandi che di colore oscuro, o nero, e più illuminati (...) Il bianco ha forza di disgregar e dilatar la vista, e perciò le cose bianche paiono sempre maggiori di quelle che sono d'altro colore; massime che nel bianco più si vedono che in qualunque altra spezie di colore. Che poi appaiono più luminose è sì manifesto, che nelle contrade strette ed oscure per aver luce maggiore nelle stanze basta imbiancare l'opposto muro del vicino."

¹⁸ IBID., Trattato III, capo 21, osservazione 7, p. 245: "Il luogo ovvero oggetto più illuminato sembra maggiore di quello che sia l'oscuro."

and the Chapel of the Santissima Sindone (1667-94).¹⁹ In them were developed and perfected many of the innovations tentatively introduced in the projected dome of Sainte-Anne-la-Royale. Both the San Lorenzo and Sindone domes are comprised of multiple, perforated shells stacked one atop the other, gradually reduced in size and rotated to produce a striking telescopic effect.²⁰ However, the shells are no longer just partially perforated, as they are in the Paris dome, but extensively so, and the ribs are no longer thin superficial strips but thick structural members that also serve key optical ends. Moreover, the flattened hemispherical shell of the Paris dome is jettisoned and replaced by steep, lofty shells whose profiles conform themselves to conic sections to create the illusion of extended height.²¹

The dome of San Lorenzo is an airy, luminous cage comprised of two domical shells, a larger one supporting a smaller one, and a lantern, aligned vertically in a telescopic grouping that continues the line of development begun at Sainte-Anne-la-Royale (Figure 4.5).²² Each of the two shells is outfitted with eight interlaced ribs to form octagonal criss-cross patterns that vary slightly from one shell to the next, a variation that contributes to a

¹⁹ For a short but informative analysis of the open character of Guarini's domes, see POMMER, *Eighteenth-Century*, pp. 7-12.

²⁰ Both San Lorenzo and the Sindone suffered terrible damage during the twentieth century. San Lorenzo was bombed during World War II and its dome subsequently rebuilt. The Sindone was devastated by a fire in 1997 and is currently undergoing reconstruction.

²¹ A conic section is a geometric figure formed when a plane intersects a cone, resulting in a circle, an ellipse, a parabola, or a hyperbola. The San Lorenzo dome is generated by an ellipsoid of revolution while the Sindone dome is generated by a paraboloid of revolution. On Guarini's use of conic sections and optical devices, see ROBISON, "Optics," pp. 384-401.

²² During the years when Guarini was erecting for the Theatines the perforated dome of San Lorenzo in Turin, Enrico Zuccalli was erecting also for the Theatines a perforated dome in Munich (1674-75); see N. LIEB and H.J. SAUERMOST, eds., *Münchens Kirchen, Mit einem chronologischen Verzeichnis der bestehenden Kirchenbauten* (Munich, 1973), pp. 113, 121, pl. 132.

general sense of rotation.²³ Again the interlaced ribs are no longer thin decorative strips, but thick structural supports.²⁴ Each of the shells is capped by a wide octagonal oculus and each is perforated at its base by large windows nestled between the springing of the ribs (the lantern too is perforated at its base by windows). The larger, lower shell is especially porous, its webbing punctured by wide openings not only at the base and crown but in the haunch as well. By contrast, the smaller, upper shell is relatively closed, its webbing largely intact and its ribs reduced to decorative strips. The windows at the base of the upper shell are concealed from the sight of the spectator below by the intervention of the oculus rim of the lower shell. Likewise, the windows at the base of the lantern are concealed by the intervention of the oculus rim below it. These concealed windows admit a light that diffuses itself and bathes the intradoses of both the upper shell and the lantern in a manner that makes them appear to “float” above the lower main shell. The areas of the dome that otherwise would be dark and appear flat, as Guarini’s theory holds, are thereby brightened and made to appear lofty. By such optical means Guarini succeeds in imparting to his church interior “an extreme sense of height and vertical extension of space.”²⁵

The presbytery of San Lorenzo is capped by its own interlaced ribbed vault, one whose articulation serves as a deliberate foil to that of the main

²³ The pattern of ribs of the lower shell is produced by the superimposition of two cruciform configurations rotated 45 degrees to one another, while the pattern of ribs of the upper shell is produced by the superimposition of two square configurations again rotated 45 degrees.

²⁴ In addition to serving structural and optical functions, the network of interlaced ribs of the San Lorenzo dome may also have been meant to serve an iconographical one with the criss-cross arrangement suggestive of the gridiron upon which the patron saint of the church, St. Lawrence, was martyred; see TAMBURINI, *Le chiese*, p. 205.

²⁵ ROBISON, “Optics,” p. 395.

dome situated above the congregational hall (Figures 4.6-4.7). The presbytery vault is comprised of a single, shallow, closed shell with six intersecting ribs that are largely decorative in nature. This contrasts with the main dome which is comprised of multiple, lofty, open shells with eight intersecting ribs that are primarily structural in nature. Also, the presbytery vault is relatively closed on its diagonal axes, with the springing of ribs aligned directly above the pendentives in a manner that closes off the corners. This again contrasts with the main dome which is open on the diagonal axes, with windows of the drum aligned directly above the pendentives in a manner that opens up the corners. In short, the presbytery vault of San Lorenzo is heavy, flattened, low, and closed. The main dome by contrast is light, airy, lofty, and open. The presbytery vault of San Lorenzo is also simpler and easier to build than the main dome, for which reason it would prove especially popular with Guarini's successors, serving as the preferred type of interlaced ribbed vault to be erected in eighteenth-century Piedmont. Only Bernardo Vittone himself, alone among Guarini's Piedmontese followers, would design vaults with the optical and illusionistic qualities that are so prominent in the main dome of San Lorenzo.

Guarini's dome of the Sindone likewise is an airy, luminous cage comprised of arched ribs that, like those of the San Lorenzo dome, serve predominantly structural and optical ends (Figure 4.8).²⁶ The arched ribs are

²⁶ The network of interlaced ribs may also have been intended to serve an iconographical function. The Chapel of the Sindone was built to shelter the Holy Shroud, a relic believed to bear the image of the Crucified and Risen Christ, and the telescopic stacking of ribs in the dome gives the appearance of the Crown of Thorns; see N. CARBONERI, "Vicenda della cappella per la Santa Sindone," *Bollettino della Società Piemontese di Archeologia e di Belle Arti* n.s. XVIII (1964), pp. 94-109, here p. 109. The reference to the Crown of Thorns, implicit in the ribbed dome, is made explicit in the Corinthian capitals below in which a nest of thorns was substituted for the usual acanthus leaves; see J.B. SCOTT, "Guarino Guarini's Invention of the Passion Capitals in the Chapel of the Holy Shroud," *Journal of the Society of Architectural*

grouped in six superimposed tiers, each tier tracing out a hexagon in plan and rotated 30 degrees to the tier immediately below in such a manner that the ribs spring directly from the keystones of the ribs underneath. Each tier is also both shorter and narrower than the one below, resulting in a telescopic diminution whose profile is governed by the curvature of a conic section. The lowest tier of ribs is the standard of measure by which the eye surveys the upper tiers, and because it is the same shape as the upper tiers the eye erroneously perceives it also to be the same size. Consequently, owing to the rotation and gradated diminution of tiers, the eye misjudges the dome to be taller than it is. The illusion is enhanced by the aerial perspective created by the backlighting of the ribs, and by the slight gradual lightening of color from the black stone below to the gray stone above.

Guarini also produced several unexecuted projects with interlaced ribbed domes that, like the domes of San Lorenzo and the Sindone, are characterized by a telescopic superimposition of multiple, open, rotated shells situated above a centralized space. The first is for the Padri Somaschi in Messina. It is a hexagon in plan with a central domed space surrounded by an ambulatory (Figure 4.9).²⁷ Its dome is an osseous, cage-like structure of ribs

Historians LIV:4 (December 1995), pp. 418-445. On the iconographical meaning of the dome of the Sindone, which has been interpreted in various ways, see also E. BATTISTI, "Note sul significato della Cappella della Santa Sindone del Duomo di Torino," in *Atti del X Congresso*, pp. 359-367; IDEM., *Rinascimento e barocco* (Turin, 1960), pp. 270-280; IDEM., "Schemata nel Guarini," in V. Viale, ed., *Guarino Guarini e l'internazionalità del Barocco*, 2 vols. (Turin, 1970), II, pp. 107-177; M. FAGIOLO, "La «geosofia», del Guarini," in V. Viale, ed., *Guarino Guarini e l'internazionalità del Barocco*, 2 vols. (Turin, 1970), II, pp. 179-204; IDEM., "La Sindone e l'enigma dell'eclisse," in V. Viale, ed., *Guarino Guarini e l'internazionalità del Barocco*, 2 vols. (Turin, 1970), II, pp. 205-228; and J.B. SCOTT, *Architecture for the Shroud: Relic and Ritual in Turin* (Chicago and London, 2003), pp. 191-195, 385-386.

²⁷ GUARINI, *Architettura civile*, pls. 29-30. The date of Guarini's project is unknown. Guarini worked in Messina between 1660 and 1662 and is not known to have returned there. Still, a general consensus holds that he designed the project much later in his career. PORTOGHESI, *Guarino Guarini*, p. 13, proposes a date of about 1670, i.e., several years after Guarini had begun San Lorenzo in Turin. A late date is also accepted by W. HAGER, "Guarinis

and perforated webbing, very similar to the main dome of San Lorenzo, but with six as opposed to eight ribs that, in their interlacing, trace out a Star of David in plan. It is crowned by a large hexagonal oculus that opens onto a six-sided lantern above, rotated with respect to the dome. The second project is for San Gaetano at Nice (Figure 4.10).²⁸ It is a pentagon in plan with five arches rising to frame a pentagonal oculus upon which five ribs spring to form a five-pointed star dome. A five-sided lantern caps the whole, rotated with respect to the dome.

When Guarini died in 1683 he bequeathed to Piedmont an innovative and daring architecture which, while it commanded the admiration and awe of his contemporaries,²⁹ was too personal, too complex, and too fantastic to find any immediate following. Guarini's architectural legacy in Piedmont was difficult to assimilate and, in any case, was not fully comprehended there until some 50 years later when, under Vittone's stimulus, a full-blown Guarinian revival would burst forth.³⁰ Indeed, the decades immediately following Guarini's death witnessed not so much the development and extension of Guarini's architectural innovations as the re-emergence of traditional Piedmontese building methods and forms. To the extent that Guarini's

Theatinerfassade in Messina," in *Das Werk des Künstlers. Hubert Schrade zum 60. Geburtstag dargebracht* (Stuttgart, 1960), pp. 230-240, here p.232, note 6; and H.A. MILLON, "Guarini, Guarino," in Placzek, ed., *Macmillan Encyclopedia of Architects*, II, pp. 265-279, here p. 272. See also WITTKOWER, *Art and Architecture*, p. 404, note 9 on p. 561; and MEEK, *Guarino Guarini*, p. 24, fig. 18.

²⁸ Guarini's project was never executed. It was built much later according to an entirely different design, not by Guarini but by Vittone himself; see CESCHI, "Progetti del Guarini," pp. 171-177; and FOUSSARD / BARBIER, *Baroque: Niçois*, pp. 53-57.

²⁹ In a letter of 1690 describing San Lorenzo to the Marquis Arthur de la Motte Chatelard, Maximilien Misson wrote: "Guarini has built a masterpiece, a marvel, a portent (...) Rome itself (...) has nothing to equal it."; cited in English translation in MEEK, *Guarino Guarini*, p. 1.

³⁰ On Guarini's architectural legacy in Piedmont, see ANDEREGG-TILLE, *Schule Guarinis*; and CARBONERI, "Guarini ed il Piemonte," pp. 347-384.

architectural language was continued, it was primarily in the field of decoration assimilated to the Mannerist heritage. Consequently, few interlaced ribbed vaults were erected in Piedmont during the immediate decades following Guarini's death, and those that were built were generally inspired less by Guarini's domes than by the medieval narthex vault of Sant'Evasio at Casale Monferrato. This is hardly surprising since the orthogonal intersection of ribs of the Sant'Evasio vault is simpler and easier to construct than the complex and oblique intersection of ribs of Guarini's complex star-shaped vaults.

One of the earliest such vaults, designed while Guarini was still active in Piedmont, is Sebastiano Guala's interlaced ribbed dome for San Filippo Neri at Casale Monferrato (begun 1667; Figure 4.11).³¹ It is a domical shell cut away by lunettes on the four corners above the pendentives to yield a cruciform configuration defined by an orthogonal intersection of ribs on the model of the narthex vault of Sant'Evasio. Indeed, San Filippo Neri is located in the very town in which the Cathedral of Sant'Evasio is sited. Although contemporary with the domes of both San Lorenzo and the Sindone, Guala's dome differs from them in several fundamental ways.³² It is comprised not of multiple, open shells as Guarini's domes are, but of a single closed shell whose continuous surface is punctured solely by a small oculus at the crown and

³¹ By 1672 San Filippo Neri was already in use, although not yet finished, and in 1721 it was finally consecrated. On Guala, who like Guarini was an ordained priest, and his architecture, see D. PROLA, "I rapporti fra le chiese attribuite a Sebastiano Guala in Casale e la cappella di San Bernardo a Frassinello," in *Quarto congresso di antichità e d'arte* (Turin, 1974), pp. 395-414, here pp. 399-404, figs. 1-3. See also GABRIELLI, *L'arte a Casale*, p. 36, fig. 29; BAUDI DI VESME, *Schede Vesme*, II, p. 550; BRAYDA / COLI / SESIA, "Ingegneri," p. 113; CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 39, no. 57; and VIALE FERRERO, *Ritratto di Casale*, pp. 55-56.

³² Guarini himself submitted a project for San Filippo Neri in Casale Monferrato, the vault of which, however, is comprised not of interlaced ribs but of curvilinear, serpentine ones.

four small windows at the haunch. Moreover, its ribs are flat, ornamental bands rather than the thick, structural supports favored by Guarini.³³

Another interlaced ribbed vault, this one erected several decades after Guarini's death, is Antonio Bertola's presbytery vault in Santa Maria delle Vigne at Trino Vercellese (1696-1713; Figure 4.12).³⁴ Bertola, having worked previously on several of Guarini's buildings, including the Sindone (for which he is credited with the altar) and San Filippo in Turin (for which he is again credited with the altar), was well disposed towards Guarinesque architecture.³⁵ Nevertheless, Bertola's architecture exhibits hardly any of the innovative spatial hypotheses advanced by Guarini.³⁶ And indeed, his presbytery vault of Santa Maria delle Vigne, with its two pairs of orthogonally criss-crossed ribs, took as its point of departure not Guarini's interlaced ribbed domes, but the narthex vault of Sant'Evasio. Moreover, the ribs are flat and

³³ Guala's dome displays at least one notable but curious Guarinesque feature, namely the two tiers of superimposed pendentives, an arrangement that Guarini incorporated in the upper reaches of his unexecuted project for the Sanctuary at Oropa illustrated on plate 8 of *Architettura civile*. Guarini's plate bears the date 1680, more than a decade after San Filippo Neri was begun, an indication that it was Guarini perhaps who borrowed the motif of the superimposed pendentive from Guala. On the Guarinesque character of Guala's dome, see VIALE FERRERO, *Ritratto di Casale*, pp. 55-56.

³⁴ On Bertola's vault, see N. CARBONERI, "La 'Madonna delle vigne' presso Trino," in *Studi di Storia dell'arte in onore di Vittorio Viale* (Turin, 1967), pp. 48-51; IDEM., "Guarini ed il Piemonte," pp. 354, 355, fig. 11; and CORNAGLIA, ed., *Mostra degli Scapitta*, p. 33, no. 24.

³⁵ In addition, Bertola's façade of the Ospedale della Santissima Annunziata at Savigliano (1703-10) features exaggerated flattened volutes and other Guarinesque details. On Bertola's involvement with Guarini's commissions, see E. OLIVERO, "L'altare della SS. Sindone e il suo autore," *Il Duomo di Torino* II:7 (1928), pp. 6-11; CARBONERI, *L'architetto Francesco Gallo*, p. 42; IDEM., "Architettura," in *Mostra del Barocco*, I, pp. 39-40, no. 59, pl. 52; and BRAYDA / COLI / SESIA, "Ingegneri," p. 88.

³⁶ CARBONERI, "Guarini ed il Piemonte," p. 355. One exception is the pronounced height typical of the main space of Guarini's centralized churches which likewise is to be found in Bertola's designs for the main congregational space of Santa Maria della Vigne and his original project for Santa Croce at Cuneo.

broad in a manner that more closely resembles the bands of the presbytery vaults in Santa Barbara at Mantua and San Nicolò at Verona.³⁷

In its rectangular and orthogonal configuration, the Sant'Evasio narthex vault type was particularly well suited to residential architecture, especially to the atria and stairwells of palaces. One of the earliest examples, dating to the mid-seventeenth century, is the *salone* vault of the Palazzo Madama in Turin (Figure 4.13).³⁸ Guarini himself had employed the Sant'Evasio narthex vault type in a number of his palace designs. For example, his unexecuted project for the renovation of the Castello at Racconigi (1676-83) features several interlaced ribbed vaults, all patterned, some more directly than others, after the Sant'Evasio narthex vault (Figure 4.14).³⁹ Likewise, Guarini's design for the Palazzo Carignano in Turin (begun 1679) features a number of interlaced ribbed vaults modeled after the Sant'Evasio narthex, including one erected above a room on the piano nobile (Figure 4.16), and another one, never built, proposed for a room adjacent to the oval atrium (Figure 4.15).⁴⁰

³⁷ The form of Bertano's vault may have served an iconographical purpose as well, with the criss-cross configuration of interlaced ribs suggesting a trellis, upon which vines and grape clusters are painted in a general reference to the Eucharist, and in a specific reference to the Madonna of the Vines to whom the church is dedicated.

³⁸ The architect of the *salone* vault of the Palazzo Madama is unknown. A certain connection to the work of Amedeo di Castellamonte (1610-83) is suggested, although no documentation linking him to the building site has been found; see L. MALLÉ, *Palazzo Madama in Torino*, 2 vols. (Turin, 1970), I, pp. 263-265. I am grateful to Professor Elwin C. Robison, Professor of architectural history at Kent State University, for having brought this vault to my attention. A design for the *salone* vault for the Palazzo Madama was also drawn up by Guarino Guarini, but it remained unexecuted and, in any case, is unrelated to the one that was constructed, resembling instead the perforated, double-shelled vault (also unexecuted) that Guarini proposed for the *salone* of the Castello at Racconigi; see G. ROMANO, ed., *Torino 1675-1699. Strategie e conflitti del Barocco* (Turin, 1993), pl. 39.

³⁹ It is these vaults that Guarini's patron, Emanuele Filiberto of Savoye, doubtless had in mind when he described Guarini's project for the Castello at Racconigi as "second to none in its *bizzarria* and inventiveness," (Archivio dei Principi di Carignano, Ordine); cited in English translation in MEEK, *Guarino Guarini*, p. 82. Guarini illustrates the Racconigi vaults in *Architettura civile*, pl. XXVIII, figs. 4-6; see also MEEK, *Guarino Guarini*, p. 84, fig. 70.

Guarini enlisted the Sant'Evasio narthex vault type only for his palace designs. It appears in none of his church designs. Guarini thus seems to have drawn a sharp distinction between the two vault types, reserving the Sant'Evasio narthex type exclusively for palaces, and the star-shaped type exclusively for churches. And it is not difficult to account for the distinction. A palace vault is generally required to bear upon a rectangular base of support and to carry an additional storey above, whereas a church vault, erected on a centralized plan, is required to bear upon a polygonal or circular base of support and to carry nothing but itself and a lantern. As such, the Sant'Evasio narthex vault type, with its shallow profile and orthogonal arrangement of ribs, was particularly suited to palaces, proving popular not only with Guarini, but with other Piedmontese architects as well.

One such architect, Gian Francesco Baroncelli, incorporated variations of the Sant'Evasio narthex vault in his Palazzo Barolo in Turin (1692), one for the atrium and another for the grand staircase.⁴¹ The atrium vault is comprised of five unadorned ribs, two running parallel in one direction intersecting three running parallel in the perpendicular direction. The staircase vault is more decorative, its ribs transformed into flat bands that stop short of intersecting one another at the crown by a panel bounded on its sides by lobed mouldings.

Vittone's uncle, Gian Giacomo Plantery, also erected several variations of the Sant'Evasio narthex vault. The first is a stairwell vault in the Palazzo Saluzzo Paesana (1715-22).⁴² Four ribs, two running parallel along one axis

⁴⁰ DARDANELLO, ed., *Sperimentare*, p. 44, top and bottom figures.

⁴¹ NORBERG-SCHULZ, *Late Baroque*, p. 215, fig. 297; DARDANELLO, ed., *Sperimentare*, pl. 17; CANAVESIO, *Piemonte barocco*, p. 102, figs. 68.

and two running parallel along the perpendicular axis, spring from entablature segments that in turn are supported by corbels (Figure 4.17). The ribs stop short of intersecting one another at the crown, interrupted instead by a panel circumscribed by eight concave mouldings. The ribs are decorated as consoles, with their upper ends terminating in volutes in a manner that negates the tectonic quality so prominent in the ribs of the original Sant'Evasio narthex vault.

Plantery's second vault is also for a stairwell, this one in the convent of Santa Chiara at Bra (*ca.* 1722).⁴³ It is a variation on his earlier vault, with the ribs again springing from corbels and decorated as consoles, their upper ends terminating in volutes to create a light, playful, atectonic effect (Figure 4.18). Again, the ribs stop short of intersecting one another at the crown, interrupted instead by a panel that, in this case, is bounded by oval and quadri-lobed shaped mouldings resulting in a sense of levity and airiness typical of Plantery's vaults. A notable feature of this second vault is the number of its ribs. Instead of four ribs, as is typical of such vaults, there are six, two sets of two running parallel in one direction intersected by a third set of two running parallel in the perpendicular direction.

As Plantery's nephew and presumed apprentice, Vittone would have had occasion during the early 1720s to oversee construction of his uncle's

⁴² GRISERI, ed., *Palazzo Saluzzo*, pl. VI; DARDANELLO, ed., *Sperimentare*, p. 92; PICCOLI, "Strutture voltate," p. 96, figs. 13-14 on p. 97.

⁴³ The convent was founded in 1632 and rebuilt and expanded during subsequent building campaigns. See POMMER, *Eighteenth-Century*, Appendix XIII, F., pp. 268-271, who publishes excerpts of six documents regarding the construction history of Santa Chiara. From these we learn that Plantery assisted in the design for one of the arms of the convent that had been under construction from 1683 through 1722. See also BOTTO, "Architettura," in *Arte in Bra*, pp. 91-92; C. BARBERO, M. BLANGINO, and E. MOLINARO, "Le Clarisse a Bra," *Bollettino della Società per gli Studi Storici, Archeologici ed Artistici nella Provincia di Cuneo* 117 (1997), pp. 107-170, here p. 127, fig. 10 on p. 125.

stairwell vaults in both the Palazzo Saluzzo Paesana and the convent at Bra, and in fact Vittone describes and illustrates both stairwells (but without their vaults) in his two treatises.⁴⁴ Some 20 years later, undoubtedly with his uncle's vaults in mind, Vittone would erect his own vault with orthogonally intersecting ribs in the atrium of the Ricovero dei Catecumeni at Pinerolo (1740; Figure 4.19).⁴⁵

Another variant on the Sant'Evasio narthex vault is Juvarra's atrium vault in his Palazzo Martini di Cigala (1716-19).⁴⁶ It features ribs that, like Plantery's stairwell vaults in the Palazzo Saluzzo Paesana and the convent of Santa Chiara at Bra, are decorated as consoles with their ends terminating in volutes, and that are interrupted at the crown by a panel framed, in this case, by plain rectilinear mouldings (Figure 4.20).⁴⁷

Still another variant on the Sant'Evasio narthex vault is the staircase vault in the Palazzo del Roero at Guarene (Figure 4.21), designed by the

⁴⁴ Vittone describes and illustrates the stairwell from the Palazzo Saluzzo Paesana in *Istruzioni elementari*, p. 455, pl. 79, no. 7; see also CAVALLARI MURAT, "Gian Giacomo Plantery," p. 329, fig. 9 on p. 317. He describes and illustrates the stairwell from the convent of Santa Chiara at Bra in *Istruzioni diverse*, p. 147, pl. 12; see also BARBERO/BLANGINO/MOLINARO, "Le Clarisse," p. 127, note 38.

⁴⁵ See PORTOGHESI, *Bernardo Vittone*, pp. 161-162, pl. 118.

⁴⁶ On Juvarra's atrium vault in the Palazzo Martini di Cigala, see BOSCARINO, *Juvarra architetto*, fig. 259; and NORBERG-SCHULZ, *Late Baroque*, p. 222, fig. 310.

⁴⁷ The formal and chronological parallels between Juvarra's atrium vault in the Palazzo Martini di Cigala and Plantery's stairwell vaults in the Palazzo Saluzzo Paesana and the convent of Santa Chiara at Bra is suggestive once again of a close interrelation between the architecture of the two architects that has yet to be fully examined and understood. Evidence exists that Juvarra's interest in the interlaced ribbed vault pre-dated his arrival in Piedmont in 1714. In an unexecuted design for a cruciform church, for example, drafted in Rome between 1704 and 1714, Juvarra incorporated an interlaced ribbed vault, the structural configuration of which he sketched twice, in section and in perspective on the upper left side of the sheet; see V. COMOLI MANDRACCI and A. GRISERI, eds., *Filippo Juvarra: Architetto delle capitali da Torino a Madrid 1714-1736* (Turin, 1995), p. 331, fig. 29; and A. BONET CORREA, B. BLASCO ESQUIVIAS, and G. CANTONE, eds. *Filippo Juvarra e l'architettura europea* (Naples, 1998), pp. 196-197, fig. 32.

aristocratic architect, Count Giacinto Roero di Guarene, who like Vittone was a student of, and collaborator with, Juvarra. The palace was constructed between 1726 and 1740, but was already inhabited in 1732 by which time, presumably, the vault would have been completed.⁴⁸

Variations on the Sant'Evasio narthex vault continued to be erected in Piedmont well into the late eighteenth century, examples of which include Filippo Giovanni Battista Nicolis di Robilant's *salone* and staircase vaults in the Palazzo Gozzani di San Giorgio at Casale Monferrato (begun 1778) and Michele Luigi Barbaris's *salone* vault in the Palazzo Vallesa della Martiniana in Turin (1783-86; Figure 4.22).⁴⁹

In addition to the vaults modeled after the Sant'Evasio narthex type, there were a number of vaults in eighteenth-century Piedmont that were modeled after Guarini's dome types of San Lorenzo and the Sindone. Still, hardly any of these vaults, with the exception of Vittone's domes, feature the sophisticated structural and optical properties so essential to the Guarinian originals. As a rule, again with the exception of Vittone's domes, they include no multiple shells, no perforated shells, no superimposition and rotation of shells, and no conic sections. Indeed, the only feature to identify such vaults as Guarinian at all is the criss-cross configuration of interlaced ribs.

A case in point is an eighteenth-century stairwell vault in a residence on the Piazza Emanuele in Turin (Figure 4.25).⁵⁰ It is comprised of a single,

⁴⁸ See A. PEDRINI, *Ville dei secoli XII e XVIII in Piemonte* (Turin, 1965), pp. 197, 201.

⁴⁹ On Nicolis di Robilant's *salone* and staircase vaults, see GABRIELLI, *L'arte a Casale*, fig. 48, CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 75, no. 216, pl. 175-b; IDEM., "Guarini ed il Piemonte," pp. 360-361, fig. 38; and TORNIELLI, *Architetture di otto secoli*, p. 63. On Barbaris's *salone* vault, see F. GIANAZZO DI PAMPARATO, ed., *Famiglie e palazzi dalle campagne piemontesi a Torino capitale barocca* (Turin, 1997), p. 250.

⁵⁰ See CARBONERI, "Guarini ed il Piemonte," p. 354, fig. 15.

solid, closed shell. There are no apertures — not even an oculus at the crown — to admit light. The curvature of the intrados is enveloped in darkness unrelieved by backlighting of any sort. Moreover, the vault rises from neither a circular nor a polygonal base of support (as Guarini's interlaced ribbed domes invariably do), but from an oval one. Thus a directional dimension is introduced into the plan of the vault that is completely alien to Guarini's interlaced ribbed domes.⁵¹ Finally, the ribs of the vault possess neither structural nor optical properties of significance but are applied as pure ornament. Moreover, they are neither six nor eight in number as one would expect, but seven, forming a heptagon, a rather cumbersome and curious geometrical figure made even more so by the irregular and haphazard spacing of the vertical supports upon which the ribs spring. Such awkwardness is the product of a crude and clumsy design, and is not to be confused with the sophisticated *bizzarria* favored by either Borromini or Guarini.

Interlaced ribbed vaults erected on an oval plan proved in fact to be particularly popular with a number of provincial Piedmontese architects who practiced during the eighteenth century, including notably Filippo Giovanni Battista Nicolis di Robilant, Giuseppe Gerolamo Buniva, and Michele Richiardi. Nicolis di Robilant, whose architecture in general is notable for its Guarinesque character, designed two such vaults, one for San Giovanni Decollato (today the Misericordia) in Turin (1751) and another for San Giovanni at Nice (1769-71).⁵² The Misericordia vault (Figures 4.26-4.27), the

⁵¹Guarini incorporated oval domes in several of his centrally planned churches and church projects, but none of them feature interlaced ribs. For example, his original project for the Consolata in Turin called for an oval congregational hall capped by a composite vault, but without interlaced ribs. An interlaced ribbed vault does cap the presbytery of Guarini's Consolata project, but it is raised on a hexagonal plan not an oval one.

⁵² On Nicolis di Robilant and his churches of the Misericordia in Turin and San Giovanni at

earlier of the two, was completed before Nicolis di Robilant was 30 years of age and reveals the architect's early interest in Guarini's architecture, its arrangement of six interlaced ribs clearly patterned after that of the presbytery vault of San Lorenzo.⁵³ Still, the oval plan endows the vault with a directionality that is entirely absent from Guarini's interlaced ribbed domes. Moreover, Nicolis di Robilant's vault is situated above a presbytery at the end of a longitudinal nave, an arrangement that again is unlike any of Guarini's interlaced ribbed domes.

Nicolis di Robilant originally designed the Misericordia vault as a perforated, double-shelled structure, reflecting the unmistakable influence not only of Guarini but also of Vittone. Indeed, the inner shell of Nicolis di Robilant's vault originally featured a lattice of free-spanning interlaced ribs detached from the shell in a manner similar to that of Vittone's dome of the Visitazione at Vallinotto.⁵⁴ During the course of construction, however,

Nice, see E. OLIVERO, "La chiesa della Misericordia e il suo architetto," in *L'arciconfraternita San Giovanni Battista Decollato (detta della Misericordia) nel Centenario della fondazione in Torino 1578-1928* (Turin, 1928), pp. 49-58; E. MAGGI, "L'Arciconfraternita della Misericordia," *Torino* IX:1 (1929), pp. 9-15, a source I was unable to consult; ANDEREGG-TILLE, *Schule Guarinis*, pp. 37-39; BRAYDA / COLI / SESIA, "Ingegneri," p. 124; MARINI, *L'architettura barocca*, p. 171; N. CARBONERI, "Per un profilo dell'architetto Filippo Nicolis di Robilant," *Palladio* XIII:1-4 (January-December 1963), pp. 183-197, figs. 4, 5, 9; IDEM., "Architettura," in *Mostra del Barocco*, I, p. 73, no. 209; IDEM., "Guarini ed il Piemonte," p. 354, figs. 12-13; G. CREPALDI, "La Misericordia," in D. Rebaudengo, ed., *Vecchia Torino* (Turin, 1965), pp. 238-246; TAMBURINI, *Le chiese*, pp. 385-397; MEEK, *Guarino Guarini*, p. 156; FOUSSARD / BARBIER, *Baroque: Niçois*, pp. 196-200, 217-245; M. VIGLINO DAVICO, "Filippo Giovanni Battista Nicolis di Robilant," in *Batir une ville au siècle des lumières. Carouges: modèles et réalités* (Turin, 1986), pp. 198-211; and PROLA, *40 chiese*, pp. 83-89, 211-215. The best English source on Nicolis di Robilant is H.A. MILLON, "Robilant, Filippo Nicolis di," in Placzek, ed., *Macmillan Encyclopedia of Architects*, III, pp. 591-592.

⁵³ Several other churches by Nicolis di Robilant — Sant' Albano Stura at Santa Croce (1750) and the Confraternity Church of the Gonfalone at Saluzzo (1756) — also attest to Guarini's influence; see IDEM., "Guarini ed il Piemonte," p. 359, figs. 30-31; N. GABRIELLI, *Arte nell'antico Marchesato di Saluzzo* (Turin, 1974), pp. 197, 199; MILLON, "Robilant," in *Macmillan Encyclopedia*, III, p. 591; and PROLA / PEYROT, *Architetture Barocche*, un-numbered page (listing under Saluzzo).

⁵⁴ Nicolis di Robilant's church of Santa Pelagia in Turin (1769-72) also features many Vittonian elements; see MILLON, "Robilant," in *Macmillan Encyclopedia*, III, p. 592. Vittone had drawn

Nicolis di Robilant's vault was filled in — its perforated, double-shelled structure transformed into a closed, single shell, and its free-spanning arches transformed into decorative strips attached directly to the intrados of the vault. The only perforations that remain are the windows nestled between the springing of the ribs at the base of the vault. There is not even an oculus at the crown. Instead, the intrados is painted blue to look as though it were the sky, an inexpensive but hardly adequate compensation for the loss of the original open character of the vault.

Some 20 years later Nicolis di Robilant designed the interlaced ribbed vault for San Giovanni at Nice (Figure 4.28) which, like the Misericordia vault, is positioned above a presbytery at the end of a longitudinal nave and is erected on an oval plan with the main axis of the oval turned perpendicular to the main axis of the church — features all of them wholly alien to Guarini's interlaced ribbed domes.⁵⁵ The San Giovanni vault also features a single, closed shell and six interlaced ribs, again like Nicolis di Robilant's Misericordia vault, in a variation on Guarini's presbytery vault of San Lorenzo in Turin.

Another design for an interlaced ribbed vault was made by Michele Richiardi in 1755 as part of his preliminary project for the parish church of San Germano at San Germano Vercellese, a vault that was ultimately built, but without the network of interlaced ribs.⁵⁶ Again, the vault is oval in plan with

up his own unexecuted design for Santa Pelagia in 1769, which, like Nicolis di Robilant's design, is a Greek cross with an elongated presbytery, and which appears to have served as the model for Nicolis di Robilant's design; see BERTAGNA, "Disegni e documenti," pp. 195-197. On Santa Pelagia, see also E. OLIVERO, "La chiesa di Santa Pelagia ed il suo architetto Filippo Nicolis di Robilant," *Torino* XII:2 (1932), pp. 42-55.

⁵⁵ The city of Nice, or Nizza as it is called in Italian, is located in present-day France, but during the seventeenth and eighteenth centuries it formed part of the Duchy, later the Kingdom, of Savoye.

its main axis aligned perpendicular to the longitudinal axis of the church. It is comprised of a single, closed shell topped by a lantern, and it caps a single spatial cell in a longitudinal church (positioned, however, not above the presbytery, but above the central bay of the nave). It is thus closer in its conception to Nicolis di Robilant's interlaced ribbed vaults than to Guarini's. As initially designed Richiardi's vault called for eight intersecting ribs grouped into four sets of two and arranged in such a manner that only four of the ribs actually spring from the base of the lantern, a criss-cross pattern of ribs that more closely resembles the plait configuration of Borromini's basket vaults in Rome than the star-shaped configuration of Guarini's mature domes in Turin.

There is also Giuseppe Gerolamo Buniva's interlaced ribbed vault in San Grato at Piscina (1766), erected above the presbytery on an oval plan (Figures 4.29-4.30).⁵⁷ The ribs are eight in number, tracing out an octagonal, star-shaped configuration in plan suggestive of the main dome of Guarini's San Lorenzo. Moreover, the ribs are thick supports that again recall those of Guarini's dome.⁵⁸ Still, for all its similarities to Guarini's dome, Buniva's vault finds its immediate source of inspiration in Nicolis di Robilant's interlaced ribbed vaults in the Misericordia and San Giovanni, to which it owes its single shell, its closed crown, its flattened profile, its position above a presbytery at

⁵⁶ See N. CARBONERI, "Attribuzioni e documenti vittoniani," in Viale, ed., *Bernardo Vittone e la disputà*, II, pp. 283-299.

⁵⁷ See OLIVERO, *Miscellanea di architettura*, p. 19; CARBONERI, "Architettura," in *Mostra del Barocco*, I, pp. 72-73, no. 206; and PROLA/PEYROT, *Architetture Barocche*, un-numbered page (listing under Piscina).

⁵⁸ The Guarinesque character of San Grato extends to the façade with its play of curve and counter-curve in plan. Another one of Buniva's church façades, that of San Secondo at San Secondo di Pinerolo, also exhibits a distinct Guarinian imprint; see CARBONERI, "Guarini ed il Piemonte," p. 360, fig. 35. On Buniva, see also BRAYDA/COLI/SESIA, "Ingegneri," p. 94; and MARINI, *L'architettura barocca*, p. 172.

the end of a longitudinal nave, and its oval plan, the main axis of which is aligned perpendicular to the main axis of the church.⁵⁹

Contemporaneous with Buniva's vault at Piscina is the interlaced ribbed vault of Sant' Antonio at Occhieppo Superiore (1768-74) by an anonymous architect (Figure 4.31).⁶⁰ Again it is comprised of a single, shallow, closed shell with decorative ribs. It has no drum, no oculus, no lantern, no backlighting, and indeed no apertures of any sort. However, it does not cap not the presbytery but the main congregational space of a centralized church, and its plan is not an oval but a hexagon, the configuration of its six ribs tracing out in plan a Star of David in yet another variation on Guarini's presbytery vault of San Lorenzo in Turin. The Sant' Antonio vault is slightly irregular, however. Its two equilateral triangles formed by the intersection of ribs are not symmetrically disposed but are slightly rotated with respect to one another, an anomaly generated by the alternation of wide and narrow openings of the side chapels below.

Guarinesque interlaced ribbed vaults continued to be built in Piedmont well into the late eighteenth and even the nineteenth centuries. In 1789, for example, Mario Ludovico Quarini erected an interlaced ribbed vault in his church of San Giacomo at Balangero, albeit with modifications from the original design that he had drawn up in 1774 (Figure 4.32).⁶¹ The vault's

⁵⁹ See CANAVESIO, *Piemonte Barocco*, p. 300.

⁶⁰ See PROLA / PEYROT, *Architetture Barocche*, p. 31, no. 7 on p. 33, and un-numbered page (listing under Occhieppo Superiore).

⁶¹ See POMMER, *Eighteenth-Century*, p. 119, note 83 on pp. 132-133; CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 83, no. 242, pl. 191-b; IDEM., "Guarini ed il Piemonte," p. 354, fig. 14; and CAVALLARI MURAT, *Lungo la Stura*, pp. 273-276. On Quarini and his architecture, see also MOCCAGATTA, "L'architetto Mario Ludovico Quarini," pp. 3-44; CAVALLARI MURAT, "Alcune architetture," pp. 3-7; N. CARBONERI, "Prodromi di neoclassicismo nell'architettura piemontese del Settecento. La transizione nella provincia di

provincial character is clearly manifest in its single shell construction and its placement above the presbytery of a longitudinal church. In other respects, however, it more closely resembles the main dome of Guarini's San Lorenzo: 1) it is an octagon in plan with eight interlaced ribs arranged in a star-shaped pattern, and 2) its shell is relatively open with an oculus at the crown and four windows at the base. Moreover, the ribs are made to overlap one another in a manner that suggests spatial depth in keeping with the layered arrangement of Guarini's multi-shelled domes. In short, Quarini's vault at Balangero is characterized by a marked Guarinesque quality generally lacking in the provincial vaults by Guarini's other followers in Piedmont. This is not surprising since Quarini had served as Vittone's assistant and collaborator from 1759 until 1770, in which capacity he was exposed to and mastered Guarini's principles of design. Indeed, Quarini's presbytery vault at Balangero is notable for its synthesis of Vittonian and Guarinian elements, conjoining Vittone's hollowed-out pendentive with Guarini's interlaced ribbed vault. Interestingly, the nave vault of San Giacomo also features intersecting ribs, ones that cross each other at 90-degree angles, but this vault dates to a nineteenth-century renovation.⁶²

During the nineteenth century still another interlaced ribbed vault was erected in Piedmont, this one for the monastery church at Villafranca

Cuneo, attraverso le opere di Giovanni Battista Borra e di Mario Ludovico Quarini," *Bollettino della Società per gli Studi Storici, Archeologici ed Artistici nella Provincia di Cuneo* n.s. XXVI (1949), pp. 41-62; IDEM., "Note quariniane," *Bollettino della Società per gli Studi Storici, Archeologici ed Artistici nella Provincia di Cuneo* XLII (1959), pp. 50-53; IDEM., "Architettura," in *Mostra del Barocco*, I, pp. 81-83; BRAYDA/COLI/SESIA, "Ingegneri," pp. 129-130; MARINI, *L'architettura barocca*, p. 173; and G. DARDANELLO, "Mario Ludovico Quarini e la nuova cattedrale di Fossano," in G. Romano, ed., *La cattedrale di Fossano* (Fossano, 1993), pp. 121-160, 210-232. The best account in English is M.D. POLLAK, "Quarini, Mario Ludovico," in Placzek, ed., *Macmillan Encyclopedia of Architects*, III, pp. 506-507.

⁶² See BRINCKMANN, *Theatrum Novum*, p. 20, no. 25, pl. 25; and PROLA/PEYROT, *Architetture Barocche*, un-numbered page (listing under Balangero).

Piemonte, a reconstruction of the original vault that had been built in 1715.⁶³ The interlaced ribs of the remodeled vault are purely decorative, however — fine, gossamer threads suggestive not so much of the work of Guarini as that of Johann Santini-Aichel.

Finally, interlaced ribbed vaults were erected during the eighteenth century in various regions of Italy outside of Piedmont, a few of which deserve mention. For example, in Tuscany there is Giovanni Antinori's reconstructed dome in the abbey church at Monte Oliveto Maggiore near Siena (1772-78).⁶⁴ It shares many characteristics with Quarini's presbytery vault at Balangero with which it is contemporary, namely its octagonal-circular plan, its open crown, and its eight interlaced ribs arranged in a manner like those of Guarini's dome in San Lorenzo (Figure 4.33).

There is also Giuseppe Sardi's interlaced ribbed dome in the monastic church of Santa Maria del Rosario at Marino outside Rome (1712-13), a dome with as much a Borrominesque as a Guarinesque character.⁶⁵ The ribs themselves are not so much ribs as broad flat bands comprised of a sinuous sequence of coffers filled with alternating stellar and floral rosettes and laced across the intrados to form circular and oval loops and rings (Figure 4.34).

⁶³ It is unclear whether the original vault featured interlaced ribs or not; see IBID., un-numbered page (listing under Villafranca Piemonte).

⁶⁴ See OECHSLIN, "Vittone e l'architettura," p. 33, fig. 5-c.

⁶⁵ See S. BENEDETTI, "La chiesa del SS. Rosario in Marino," *Quaderni dell'Istituto di Storia dell'Architettura* XII:67-70 (1965), pp. 7-32; MALLORY, *Roman Rococo*, pp. 53-75; and PORTOGHESI, *Roma Barocca*, pp. 366-371. Another one of Sardi's religious buildings, the Baptismal Chapel in San Lorenzo in Lucina in Rome (1721), is also characterized by a certain Guarinesque feature, namely the lantern turned at a forty five degree angle to the square of the chapel, a solution that is unusual in Roman architecture but common enough in Guarini's architecture; see N.A. MALLORY, "The Architecture of Giuseppe Sardi and the Attribution of the Façade of the Church of the Maddalena," *Journal of the Society of Architectural Historians* XXVI:2 (May 1967), pp. 83-101, here pp. 85-87, fig. 4.

They serve no significant structural function, but are deployed for reasons of optics and decoration.⁶⁶ Sardi's dome, like Borromini's vault in the Oratory of the Filippini, is embedded within the fabric of a monastic complex, its profile flattened to accommodate its placement under the storey above. Thus the interlaced ribs serve to visually mitigate the shallow curvature of the dome by creating an agitated and fluid surface imbued with a marked "spatial value and contrasting indications of depth."⁶⁷

In summary, Guarini's interlaced ribbed domes were too daring and complex to be readily assimilated into the architectural culture of Piedmont in the years following the architect's death. To the extent that subsequent architects adopted the formal trappings of Guarini's domes, the vast majority did so without fully grasping their structural and aesthetic significance. More often than not they turned to the medieval narthex vault of Sant'Evasio at Casale Monferrato for inspiration, a precedent that Guarini himself, with the exception of several of his palace designs, had purposely ignored. Thus whereas Guarini's interlaced ribbed domes are typically comprised of multiple, complex, perforated, and lofty shells, those of most of his Piedmontese followers — Guala, Bertola, Plantery, Nicolis di Robilant, Richiardi, Buniva, and Quarini — are with few exceptions comprised of single, simple, closed, and shallow shells. Whereas Guarini's domes are abundantly illuminated by both concealed and unconcealed windows, those of most of his Piedmontese followers are dimly illuminated, many of them constructed

⁶⁶ The network of interlaced ribs may also have served iconographical ends, with the staccato rhythm and curvilinear sweep of the ribs plainly suggesting the sequence of beads in a rosary strung across the dome of this church dedicated to the Madonna of the Rosary.

⁶⁷ PORTOGHESI, *Roma Barocca*, p. 368.

without a lantern or any openings at all. Whereas Guarini's domes are characterized by conic sections, the telescopic superimposition and rotation of shells, aerial perspective, and other optical refinements, no such sophistication characterizes the domes of most of his Piedmontese followers. Indeed, the only feature that the domes of most of Guarini's successors have in common with Guarini's originals is the network of interlaced ribs themselves, and yet even these, for the most part, were employed towards limited ends. Thus whereas Guarini had incorporated the interlaced ribs mainly for their structural and optical properties, the majority of his followers incorporated them exclusively their decorative properties.

Furthermore, Guarini's interlaced ribbed domes are, with few exceptions, consistently reserved for large, centralized, congregational halls. They are never made to span longitudinal spaces, but only centralized ones in keeping with the overall telescopic effect Guarini sought to create. By contrast, the vaults of most of Guarini's Piedmontese followers are, as a rule, made to span a presbytery or else a single bay in a longitudinal church.⁶⁸ Guarini's interlaced ribbed domes are themselves invariably centralized in plan, rising exclusively from polygonal or circular bases of support, never from an oval one. By contrast, the vaults of most of Guarini's Piedmontese followers are, again as a rule, oval in plan, incorporating thereby a directionality absent in the Guarinian originals. The close connection between the interlaced ribbed dome and centralized planning which is so essential and

⁶⁸ On the two occasions that Guarini did adapt the interlaced ribbed vault to a presbytery (e.g., San Lorenzo and his project for the Consolata in Turin), he did so by equipping the vault with a single, closed shell rather than multiple, open ones. In this respect Guarini's presbytery vaults with interlaced ribs are not unlike their provincial Piedmontese successors. Still, neither the presbytery of San Lorenzo nor the presbytery of the Consolata is adjoined to a longitudinal nave, and in none of his churches did Guarini ever erect an interlaced ribbed dome on an oval plan, or position it above an oval or otherwise longitudinal space.

vital to the integrity of Guarini's church designs was thereby compromised and undone.

In short, the interlaced ribbed vaults of most of Guarini's Piedmontese followers lack the illusionism that characterizes Guarini's domes. To the extent that they looked to Guarini's domes as models, they looked almost exclusively to the presbytery vault of San Lorenzo, the most decorative, least open, and least illusionistic of Guarini's *oeuvre*. In the hands of Guarini's Piedmontese successors, the interlaced ribbed vault was reduced to little more than an architectural cliché, its structural and aesthetic rationale largely negated.

Vittone's Designs

There was one architect, however, alone among Guarini's Piedmontese followers, who appreciated the optical properties of Guarini's domes and deemed them worthy of imitation and further development. That architect was Bernardo Vittone. Vittone alone equipped the interlaced ribbed dome with multiple, superimposed, and perforated shells. Vittone alone illuminated the interlaced ribbed dome by means of both concealed and unconcealed windows. And Vittone alone consistently restricted the interlaced ribbed dome to a strictly polygonal or circular plan, and confined it to the main congregational space of a centralized church. Vittone, with few exceptions, never designed an interlaced ribbed vault on an oval plan, nor did he adapt such a vault to the bay of a longitudinal church. In short, Vittone, alone among Guarini's Piedmontese followers, recognized and valued the

optical and illusionistic qualities so essential to Guarini's interlaced ribbed domes, and developed them further in his own dome designs.

Vittone's taste for illusionism was fostered by his academic training in Rome, in the copying of caprices and architectural fantasies, by which he came to master the principles of scenographic design. It was a training that none of Guarini's other followers in Piedmont received. Indeed, Vittone was the only one of Guarini's followers in Piedmont to have studied in Rome. Guala, Bertola, Plantery, Michela, Nicolis di Robilant, Richiardi, Buniva, and Quarini — all received their training and education not in Rome but in Piedmont.⁶⁹ It was also at the Accademia di San Luca that Vittone designed interlaced ribbed vaults for the first time, introducing them in his prize-winning project for the *Concorso Clementino* of 1732.⁷⁰ The topic of the competition, it will be recalled, was *A City Surrounded by the Sea*, for which Vittone designed a central circular piazza surrounded by building blocks divided by a *cardo* and a *decumanus* into four quadrants, with each quadrant containing a Greek cross church facing onto the piazza and flanked by apartments with three large courtyards of various shapes (Figure 1.5).

⁶⁹ Guala was an ordained priest and theologian who practiced architecture mainly in the region of Casale Monferrato (BRAYDA/COLI/SESIA, "Ingegneri," p. 113). Bertola was trained as a military engineer and architect (IBID., p. 88). Nicolis di Robilant, a nobleman, was also trained in the military arts before turning his attention to architecture in which he was largely self-taught (IBID., p. 124). Buniva was educated at the Royal University in Turin where he received his diploma on 29 January 1739 (IBID., p. 94). Quarini was also educated at the Royal University in Turin where he received his diploma on 21 February 1759 shortly before entering Vittone's studio; (BAUDI DI VESME, *Schede Vesme*, III, p. 881; BRAYDA/COLI/SESIA, "Ingegneri," p. 129). On the other hand, there were a number of minor architects in Piedmont, many of them members of the nobility, who had trained in Rome — Benedetto Alfieri, Ferdinando Bonsignore, Carlo and Amedeo di Castellamonte, Francesco Valeriano Dellala di Beinasco, Paolo Antonio Massazza di Valdandona, and Carlo Giuseppe Re — none of whom, however, designed interlaced ribbed vaults or designed in a Guarinesque manner; see BRICARELLI, "L'influenza di Roma," p. 223; MILLON, "Native Origins," p. 676; and BRAYDA/COLI/SESIA, "Ingegneri," pp. 82-83, 91-92, 97-98, 103-104, 120, 132.

⁷⁰ These vaults were first identified by MILLON, "Alcune osservazioni," pp. 146-147, figs. 136-138; and IDEM., "Vittone," *Architectural Review*, p. 98, fig. 11.

The interlaced ribbed vaults of Vittone's academic project are of two types, a hexagonal type and a triangular type. The first type is comprised of six intersecting ribs arranged to form a Star of David configuration in plan (Figure 4.35). It occurs in the Greek cross church occupying the building block in the lower right quadrant of the central piazza (actually there are four such vaults in the church, one in each of the corner chapels that surround the central dome). The second type is comprised of three ribs arranged to form an equilateral triangle in plan, with the ribs springing not from the three walls that circumscribe the rotunda, but from the keystones of the three arches that span the corner niches (Figure 4.36). It occurs in the annex building occupying the block in the upper left quadrant of the central piazza. Here the vault appears just once, in a chapel located next to one of the courtyards. There are a total then of five interlaced ribbed vaults, all of them reserved for chapels as indicated in no uncertain terms by figures of crosses marking out the position of the altar within them. The first type of vault is a variation on the presbytery vault of San Lorenzo, the second type a variation on the dome of the Sindone.⁷¹

Vittone's designs for interlaced ribbed vaults in the *Concorso Clementino* project were tentative, youthful exercises, differing from Guarini's interlaced ribbed domes in several fundamental respects. In the first place, they are, all five of them, relegated to minor subsidiary spaces, unlike Guarini's interlaced

⁷¹ IDEM., "Alcune osservazioni," p. 147. POMMER, *Eighteenth-Century*, p. 108, describes Vittone's homage to Guarini as "a youthful gesture of local patriotism" and "in no small measure a nationalistic one." But see OECHSLIN, "Vittone e l'architettura," p. 33, note 4, who identifies a non-Guarinian, extra-Piedmontese source of inspiration for Vittone's academic vault designs, namely Giuseppe Ercolani's student project submitted to the Accademia di San Luca in 1708, a project conserved at the Accademia and therefore readily available to Vittone. PORTOGHESI, *Bernardo Vittone*, p. 90, identifies still another extra-Piedmontese source of inspiration, namely Giuseppe Sardi's interlaced ribbed dome in Santa Maria del Rosario at Marino outside Rome, which Vittone could have seen during his Roman sojourn.

ribbed domes which, as we have seen, are typically positioned above major centralized spaces. In the second place, four of them are inserted into a single Greek cross church similar in plan to Juvarra's Sant'Uberto at Venaria Reale, again in contrast to Guarini's interlaced ribbed domes which are never combined with a Greek cross church. By incorporating Guarinesque vaults within an otherwise Juvaresque church, Vittone took the first step towards integrating elements of Guarini and Juvarra's architecture. At this early stage, however, the Guarinesque and Juvaresque elements are merely juxtaposed, not yet synthesized, as they would be in his later designs. Still, it is in the *Concorso Clementino* project that Vittone, for the first time, united Guarinesque and Juvaresque elements in one design thereby introducing one of the principal themes of his art.⁷²

Vittone's understanding of Guarini's architecture was deepened when, upon his return to Piedmont in 1733, he was commissioned by the Theatines to edit Guarini's architectural papers for publication. If, in the process of editing *Architettura civile*, Vittone may not have fully comprehended certain aspects of Guarini's writings, notably the section on stereotomy,⁷³ he nevertheless assuredly understood Guarini's writings on ocular illusion which did much to shape his own theory. Vittone's preparation of Guarini's treatise for publication was a decisive factor in his architectural formation, coming as it did soon after he had completed his apprenticeship and academic education

⁷² On the Vittonian synthesis of Guarini and Juvarra's architecture, see G. DE LOGU, *L'architettura italiana del Seicento e del Settecento*, 2 vols. (Florence, 1935), II, p. 33; WITTKOWER, *Art and Architecture*, pp. 424-432; IDEM., "Vittone's Domes," p. 212; MILLON, "Alcune osservazioni," pp. 147-148; IDEM., *Baroque and Rococo Architecture* (New York, 1961), p. 25; IDEM., "Vittone," *Architectural Review*, pp. 97-104; PORTOGHESI, *Bernardo Vittone*, pp. 89, 97; and POMMER, *Eighteenth-Century*, pp. 85-86, 110-112.

⁷³ MÜLLER, "Authenticity," pp. 202-208; IDEM., "Vittone ed il modo," pp. 811-816.

but before he had resumed his practice in earnest. Vittone's ready reception and assimilation of Guarini's architectural ideas were facilitated in good measure by his academic training in Rome, for it was at the Accademia di San Luca that Vittone immersed himself in the culture of the Borrominian revival that undoubtedly served to quicken his taste for *bizzarria*.

Vittone's fascination with *bizzarria* reached its peak during the years immediately following the publication of *Architettura civile*. This fascination is clearly discernible in his unexecuted project for an ideal church with an interlaced ribbed dome described and illustrated in *Istruzioni diverse*,⁷⁴ a project that is undated, but one whose unresolved juxtaposition of Guarinesque and Juvaresque elements identifies it as an immature design drawn up in all probability during the early to mid-1730s.⁷⁵ Vittone informs us that, on account of its form and size, it could serve as a parish church "in some very conspicuous place."⁷⁶ He explains that the design is quite arbitrary and conceived for a large indeterminate site.⁷⁷ The church stands free, isolated from other buildings, with its exterior walls all covered in ornament.⁷⁸ Not

⁷⁴ VITTORE, *Istruzioni diverse*, p. 167, pl. 81. See also CAVALLARI MURAT, "L'architettura sacra," p. 51, fig. 34; PORTOGHESI, *Bernardo Vittone*, pp. 102-103, fig. XIII; POMMER, *Eighteenth-Century*, p. 114, fig. 174; CARBONERI, "Guarini ed il Piemonte," p. 358, fig. 28; and TAVASSI LA GRECA, *Bernardo Antonio Vittone*, p. 16.

⁷⁵ OLIVERO, *Le opere*, p. 72, argues that Vittone drew up this project while still a student at the Accademia di San Luca; POMMER, *Eighteenth-Century*, p. 108, note 13 on p. 122, believes that the project was drawn up during Vittone's Roman sojourn, and dates it (p. 114) to 1732; CARBONERI, "Guarini ed il Piemonte," p. 358, also suggests a rather early date for this project, a date when Vittone was still imbued with the scholastic principles of the Accademia.

⁷⁶ VITTORE, *Istruzioni diverse*, p. 187: "Un' idea rappresenta la Tav. 81. d'una Chiesa a mio senso non disagiata, la quale per la sua forma, e grandezza servir potrebbe di Parrocchiale in qualche luogo assai cospicuo."

⁷⁷ IBID., p. 187: "Ella è affatto arbitraria, e concepita s'un sito d'indeterminata grandezza..."

⁷⁸ IBID., p. 187: "...e libero affatto da ogni soggezione, e vicinanza di Fabbriche: e però ornata comparare esternamente per tutte le parti..."

only is the church freestanding, it is elevated upon a stepped platform that completely surrounds the church and echoes its plan.⁷⁹ Vittone singles out the dome for comment, boasting that its form is not without playful novelty and *bizzarria*.⁸⁰ Once again, as in his earlier project for the *Concorso Clementino* competition, Vittone combines a Guarinesque interlaced ribbed dome with a Juvaresque Greek cross church.⁸¹ Here, however, the interlaced ribbed dome is reserved not for the minor subsidiary spaces, as in his academic project, but for the main central crossing of the church.⁸²

The dome itself consists of two shells, an outer and an inner one, supported by four crossing piers. The two shells are distinct from one another, the outer one a closed, solid casing, the inner one an open, osseous screen of interlaced arches. This layering of two shells, the inner one more open than the outer one, serves to confound the spectator's capacity to gauge the spatial limits of the dome. A similar double-layered arrangement is introduced in the plan whereby an internal cage of piers and columns is surrounded by a closed, continuous external wall. In his treatise Vittone defines the vault as an arcuated wall,⁸³ and to the extent then that the walls of

⁷⁹ IBID., p. 187: "...con gradinata eziandio all' intorno, che la distacca, e solleva dal piano comune del sito, su cui ella verrebbe elevata."

⁸⁰ IBID., p. 187: "Non senza novità di scherzo, e bizzarria formata n' è la Cupola, siccome ben si può dall' Elevazione comprendere."

⁸¹ The close connection between the two church projects is discussed by PORTOGHESI, *Bernardo Vittone*, pp. 102-103.

⁸² The two church projects also differ, if only slightly, in plan, with the project for a parish church "in some very conspicuous place" designed as a simple Greek cross and the academic church project designed as a Greek cross inscribed within a square, the former project derived ultimately from Santa Maria della Consolazione at Todi and the latter from Juvarra's Sant'Uberto at Venaria Reale.

his parish church project are a double-layered structure, the inner layer more open than the outer one, the dome too becomes a double-layered structure that continues the arrangement below.

The ribs of the inner shell of the dome are eight in number and trace out in plan an octagonal, star-shaped configuration generated by the intersection and rotation of two squares.⁸⁴ The ribs spring directly from the keystones of the four main crossing arches and the four minor diagonal arches that span the corners of the crossing. However, not all of these keystones reach the same height. Those of the corner arches rise to a slightly higher level than do those of the crossing arches, and consequently the ribs that spring from the corner arches also rise to a slightly higher level than do those that spring from the crossing arches. The result is a dazzling array of “undulating crests” designed to astonish and delight the spectator. The sense of bewilderment is reinforced by the extensive perforations that Vittone inserted into the pendentives and the inner shell of the dome.

In describing the parish church project in his treatise Vittone proudly emphasizes its arbitrary, novel, playful, and bizarre character, aspects that pertain in particular to the Guarinian dome. And yet there is much else in the design that is not arbitrary, novel, playful, or bizarre. For if the dome itself is a capricious, eccentric, and fanciful structure, then the lower body of the church is a conventional and regular one based on the Albertian ideal. There is something incongruous in combining a Guarinian dome with an Albertian

⁸³ VITTONI, *Istruzioni elementari*, p. 500: “Le volte sono muri arcuati, li quali spiccandosi dai muri diritti, loro servon d’appoggio, e si stendono a coprire col proprio corpo i vani esistenti fra essi.”

⁸⁴ The pattern of interlaced ribs is precisely the same as that of the upper shell of the main dome of Guarini’s San Lorenzo.

or Juvarrian substructure, and yet it is by means of this combination that Vittone succeeds in balancing the demands of conventionality and eccentricity, of seriousness and licentiousness, and of antiquity and modernity that he so highly recommends to the young architect.⁸⁵

Surprisingly, Vittone's description of his parish church project, particularly its dome, includes nothing about light, nothing about the eye, and nothing about lines of sight. Consequently, it would appear that, at this early point in his practice, Vittone valued the interlaced ribbed dome less for its optical and illusionistic properties than for its capricious and whimsical ones. Vittone's dome design features neither conic sections nor the perspectival gradations that characterize Guarini's interlaced ribbed domes. Still, it reflects an attentive study of Guarini's architecture since both the springing of the ribs from the keystones of ribs below and the perforating of the pendentives with round oculi were derived directly from the Sindone.

Vittone's designs for interlaced ribbed domes remained abstract exercises on paper until, with the commission for the Sanctuary of the Visitazione at Vallinotto (1738-39), he was able to oversee construction of an interlaced ribbed dome for the first time. Vittone describes the church in *Istruzioni diverse*, telling us that it was commissioned by the Turinese banker, Antonio Facio, who had it erected on the site of one of his villas to serve the spiritual welfare of the agricultural laborers living nearby.⁸⁶ The exterior of

⁸⁵ IBID., p. 412: "...giova osservare le Opere de' più antichi poco allo scherzo intenti Architetti, quali fra gli altri furono Vitruvio, Alberti, e Serlio, e de' più licenziosi, e meno della naturalezza amici moderni, quali si dimostrarono il Cavalier Borromino, ed il Padre D. Guarino..."

⁸⁶ IDEM., *Istruzioni diverse*, p. 186: "Dimostra nella Tav. 78. l'idea, secondo la quale, per secondare il divoto singolar genio del già sovra menzionato Signor Banchiere Antonio Facio, ho formato il Disegno d'una Cappella campestre sotto il titolo della Visitazione di Maria Santissima, fatta da esso grandiosamente erigere sul sito d'una sua Villa posta sovra il

the church is divided into two orders or stories (Figures 4.44).⁸⁷ The interior consists of only one storey, surmounted by three vaulted shells one above the other, all of them perforated and open (Figures 4.40-4.43).⁸⁸ Vittone does not describe the dome further, nor does he mention the interlaced ribbed structure itself that forms the lowest of the three shells of the dome. Vittone states that the spectator is able to view the spaces that exist within and beyond the shells and, with the help of light entering through hidden windows, enjoy the variety of celestial hierarchies which rise, in a growing crescendo, up the dome to the very top of the lantern where, he tells us, a symbol of the most Holy Trinity is represented.⁸⁹ The Trinitarian symbol, a radiant delta, also appears on several of the church furnishings, including the tabernacle and the two confessionals (Figure 4.46).⁹⁰ It also appears in the lowest shell of the dome itself, in the intersection of two equilateral triangles that forms a Star of David configuration of interlaced ribs. In devising his dome as an image of heaven Vittone relied heavily upon Guarini's repertoire of interlaced ribs,

Territorio della Città di Carignano in attinenza della strada, che quindi tende a Vigone (...) che cotidianamente vi officj, ed ivi s'impieghi alla spirituale coltura della gente di campagna, che in varie Ville vi ha là attorno esistenti l'abitazione." The church cost 90,000 lire, a very high sum for the time, with Facio also giving 12,000 lire to the *cappellania laicale* on 15 November 1740 and annual stipends of 500 pounds; see G.B. LUSSO, *Carignano: i "luoghi pii"* (Pinerolo, 1971), p. 356. See also W. CANAVESIO, "La 'piccola corte' del banchiere Antonio Facio. Una ricerca sui committenti di Bernardo Antonio Vittone," in W. Canavesio, ed., *Il voluttuoso genio dell'occhio: Nuovi studi su Bernardo Antonio Vittone* (Turin, 2005), pp. 35-84.

⁸⁷ VITTONI, *Istruzioni diverse*, p. 186: "Forma questa Chiesa nell' esterno, siccome scorgere si può dall' alzata, due Ordine, o Piani, de' quali espressa resta ivi insieme la metà della Pianta."

⁸⁸ IBID., p. 186: "Nell' interno pero ella è ad un Piano solo, che sormontato va da tre Volte l'una sovra l'altra esistenti, tutte traforate, ed aperte..."

⁸⁹ IBID., p. 186: "...così che luogo ha la vista di coloro, che si trovano in Chiesa, a spaziare per li vani, che esistono fra esse, e godere in tal modo coll' ajuto della luce, che vi s'intromette per mezzo di Finestre internamente non apparenti, la varietà delle Gerarchie, che gradatamente crescendo vi si rappresentano in esse Volte, e fino alla sommità del Cupolino, ove espressa vedesi la Santissima Triade."

⁹⁰ See C. ARDUINO and G. GENTILE, "Itinerari per una lettura," in *Carignano. Appunti per una lettura della città*, 4 vols. (Carignano, [1980]), I, pp. 9-122, here p. 98, figs. 164, 167.

perforated and superimposed shells, hidden windows, and other optical devices.⁹¹

According to Wittkower, Vittone deliberately chose the triple-shelled structure “because it symbolized the mystery of the Trinity,” and it is this equation of the triple-shelled dome with the Trinity, he argues, that is the *raison d’être* of Vittone’s design.⁹² The allusion to the Trinity is evident not only in the triple-shelled dome but also in the triangular-hexagonal plan (Figure 4.39).⁹³ It is a plan that has several precedents in Piedmont.⁹⁴ In Turin, for example, there is Ascanio Vitozzi’s Santissima Trinità (1598-1661), its trilobed geometry obviously symbolizing the Trinity to whom the church is dedicated (Figure 4.64).⁹⁵ Also in Turin there is Guarini’s Sindone whose prevailing circular geometry is nevertheless informed by the tripartite arrangement of its three entrances, three crossing arches, and three

⁹¹ The image of heaven is represented not only on the interior of the dome by means of the superimposed shells and fresco, but also, it would seem, on the exterior by means of the polychrome majolica tiles, arrayed like the bands of a rainbow, that cover the original dome which in time was concealed from view by the present-day external reconstruction. Colored tiles applied to domes for the purpose of representing the image of heaven had been realized by artisans working in the northwest regions of Italy since at least the time of the early Renaissance. For example, the interior dome of Michelozzo Michelozzi’s Portinari Chapel in Sant’Eustorgio in Milan (begun 1462) is covered with polychrome tiles that have been shown to represent an image of heaven; see J.A. GITLIN BERNSTEIN, “Science and Eschatology in the Portinari Chapel,” *Arte Lombarda* n.s. 60 (1981), pp. 33-44.

⁹² WITTKOWER, “Vittone’s Domes,” p. 214. See also PASSANTI, “Per Bernardo Vittone,” p. 6: “...l’ambiente centrale si apre sul Cielo popolato dalle Gerarchie via via più lontane, che fan corona alla Santissima Trinità...”

⁹³ L. QUAGLINO PALMUCCI, “Bernard-Antoine Vittone: églises Saint-Bernardin de Chieri et Sainte-Claire de Verceil,” in *Congrès Archéologique du Piémont* (Paris, 1977), pp. 387-403, here pp. 391-392, notes 14-15 on p. 400.

⁹⁴ CAVALLARI MURAT, “L’architettura sacra,” pp. 36-37, figs. 2-3; WITTKOWER, *Art and Architecture*, p. 206; MUNSHOWER, ed., *Architectural Fantasy*, p. 31.

⁹⁵ CARBONERI, “Architettura,” in *Mostra del Barocco*, I, p. 24, no. 3: “La pianta trilobata, evidente simbolo trinitario, potè essere considerata un’anticipazione del tema di Sant’Ivo..., che poi ritorna nella versione guariniana della cappella della Santa Sindone.”

pendentives, resulting in an implicit triangular geometry that makes its own veiled reference to the Trinity (Figure 4.66).⁹⁶ Outside Piedmont, in Rome, there is notably Borromini's Sant'Ivo alla Sapienza in Rome (Figure 4.68), its plan characterized by a triangular-hexagonal geometry with alternating concave and convex niches.⁹⁷

Vittone employed a plan comparable to that of Sant'Ivo for the Visitazione, with the concave niches reserved for chapels and the convex ones reserved for *coretti* and the entrance.⁹⁸ Still, the plan of the Visitazione differs from that of Sant'Ivo in one important respect — it features an apsidal row of columns separating the choir from the presbytery proper. This screen of columns finds its immediate precedent in church designs by Guarini (Figures 4.6) and Juvarra (fig 1.8), but its ultimate derivation is from Palladio.⁹⁹ It is a

⁹⁶ MILLON, "Vittone," *Architectural Review*, p. 98.

⁹⁷ J.M. SMYTH-PINNEY, "Borromini's Plan for Sant'Ivo alla Sapienza," *Journal of the Society of Architectural Historians* LIX:3 (September 2000), pp. 312-337.

⁹⁸ The close connection between the plans of the Visitazione and Sant'Ivo is discussed by CAVALLARI MURAT, "L'architettura sacra," p. 37; IDEM., *L'avventura neoguariniana*, p. 487; MILLON, "Alcune osservazioni," p. 149; IDEM., "Vittone," in *Macmillan Encyclopedia*, IV, p. 343; PORTOGHESI, "Metodo e poesia," pp. 100-101; IDEM., *Bernardo Vittone*, pp. 89, 98; ANDEREGG-TILLE, *Schule Guarinis*, p. 46; PEROGALLI, "Nota sull'architettura," p. 878; CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 20, no. 21, figs. 19-23; POMMER, *Eighteenth-Century*, p. 110; NORBERG-SCHULZ, "Centrality and Extension," p. 96; IDEM., *Late Baroque*, p. 167; GIUDICI/MEMOLI, *La architettura*, p. 279; and WITTKOWER, *Art and Architecture*, p. 425, note 61 on p. 565. Vittone also modeled several other church designs after Sant'Ivo, including, most notably, his unexecuted project for the church of the Chierici Regolari degli Infermi in Turin (ca. 1750), a project that resembles Sant'Ivo not only in its hexagonal plan but also in the stepped extrados of its dome; see VITONE, *Istruzioni diverse*, pl. 56; and OECHSLIN, "Il soggiorno," p. 433, fig. 43.

⁹⁹ See WITTKOWER, *Art and Architecture*, pp. 420, 427; MILLON, "Alcune osservazioni," pp. 148-149; and PORTOGHESI, *Bernardo Vittone*, p. 122. Palladio incorporated the apsidal screen of columns in the Redentore in Venice (begun 1577) where it produces a striking scenographic effect. The motif was subsequently picked up by Bernini and applied to the main altars of San Paolo Maggiore in Bologna (1634-37) and Sant'Andrea al Quirinale in Rome (1658-70) where it again produces scenographic effects. Guarini applied the motif to his designs for San Lorenzo in Turin (1666-87), San Gaetano at Nice (ca. 1670s), and Santa Maria di Ettinga in Prague (1679). Likewise, Juvarra applied the motif to his designs for the Venaria Reale (1715-28), San Raffaele in Turin (ca. 1724), and the Jesuit church at Vercelli (1734). Guarini and Juvarra did

device that is particularly well suited to churches designed on a centralized plan since, as Wittkower explains, it “...helps to preserve the integrity of the centralized space and, at the same time, overcome its limitations.”¹⁰⁰ At Vallinotto the apsidal screen of columns serves to extend the liturgical axis of the church even as it preserves the integrity of the centralized space.¹⁰¹ Vittone incorporated apsidal screens of columns in his designs for other centrally planned churches as well, including Santi Marco e Leonardo in Turin (1740, demolished 1811) and his unexecuted projects for Santa Chiara at Alessandria and Santa Maria Maddalena at Mondovì (1749), all of which, like the Visitazione, date to the early decades of his practice.¹⁰² Vittone also incorporated the motif in his undated and unexecuted project for the Nuovo Duomo in Turin.¹⁰³

The Visitazione also differs from Sant’Ivo in its openwork, triple-shelled dome (Figure 4.41). Of the three shells of Vittone’s dome, the outermost and intermediate ones are relatively closed, with perforations only at the crowns and haunches. The innermost shell, by contrast, has been

much to popularize the motif in Piedmont where it also appears in Francesco Gallo’s Santissima Trinità at Fossano (1730-39) and San Pietro at Casale Monferrato (1727-47), Alfieri’s Santi Giovanni Battista e Remigio at Carignano (1758-61), Costanzo Michela’s unexecuted hexagonal project for San Salvatore at Borgomasino (1748-49), Giuseppe Giacinto Bays’s Sant’Antonio Abate at Chieri (1767-68), and Pietro Bonvicini’s San Michele in Turin (1784).

¹⁰⁰ WITTKOWER, *Art and Architecture*, p. 427.

¹⁰¹ On the simultaneous central and longitudinal character of the Visitazione and other Vittonian churches, see NORBERG-SCHULZ, “Centrality and Extension,” pp. 93-104, 249.

¹⁰² Vittone abandoned the motif of the apsidal screen of columns after 1750 just as he abandoned, at about the same time, a number of other motifs notable for their scenographic properties, namely the interlaced ribbed dome, the perforated multi-shelled dome, and the perspectival window. This is in contrast to Alfieri, Bonvicini, Bays, and other provincial architects in Piedmont who continued to employ apsidal screens of columns well past mid-century.

¹⁰³ VITTONI, *Istruzioni diverse*, pl. 84. See PORTOGHESI, *Bernardo Vittone*, p. 128, fig. XLI.

severely cut away, and is in fact not a shell at all but a lattice of six flying and intersecting ribs. The ribs intersect one another in such a manner as to form a large hexagonal oculus at the crown surrounded below by six smaller hexagonal apertures. The multi-layered arrangement of the domical shells complements the multi-layered arrangement of the altar-recess in which the presbytery is separated from the choir by the apsidal screen of columns. In architectural as well as psychological terms then, the interior of the Visitazione has two spiritual centers — the dome and the altar-recess, both of them veiled by scenographic screens.¹⁰⁴ It is a formula that, in its general application, Vittone had first advanced in his project for a parish church “in some very conspicuous place.” But whereas in his parish church project Vittone extended the multi-layered arrangement in plan to the entire perimeter of the building, at Vallinotto he strategically restricted it to the altar recess.

In its multi-layered arrangement of shells the dome of the Visitazione more closely resembles, not the dome of Sant'Ivo, but the domes of Guarini's church designs. The superimposition of multiple shells was inspired, in particular, by the dome of Guarini's unexecuted project for San Gaetano at Vicenza in which two shells are superimposed (Figure 4.91).¹⁰⁵ The innermost shell of the Vallinotto dome, however, with its open armature of six interlaced ribs arranged according to a Star of David in plan, was derived specifically

¹⁰⁴ WITTKOWER, *Art and Architecture*, p. 183, identifies the dome and the altar-recess as the twin spiritual centers of Bernini's Sant'Andrea al Quirinale.

¹⁰⁵ On the close connection between Vittone's dome of the Visitazione and Guarini's projected dome for San Gaetano at Vicenza, see RODOLFO, “L'architettura barocca,” p. 138; WITTKOWER, *Art and Architecture*, p. 427, note 62 on p. 565; MILLON, “Vittone,” *Architectural Review*, pp. 98, 100; PORTOGHESI, “Metodo e poesia,” p. 100; IDEM., *Bernardo Vittone*, p. 98; PEROGALLI, “Nota sull'architettura,” p. 878; POMMER, *Eighteenth-Century*, pp. 110-111; CARBONERI/VIALE, ed., *Bernardo Vittone*, p. 20, no. 21, figs. 19-23; CARBONERI, “Guarini ed il Piemonte,” p. 356; PASSANTI, “Per Bernardo Vittone,” p. 6; GIUDICI/MEMOLI, *La architettura*, p. 279; and MEEK, *Guarino Guarini*, p. 157.

from the presbytery vault of San Lorenzo and the dome of Guarini's project for the Padri Somaschi in Messina.¹⁰⁶ Never, however, did Guarini stack as many as three shells together as Vittone did at Vallinotto, and never did he treat the intersecting ribs as free-spanning, non-load bearing members.¹⁰⁷ For although constructed of brick masonry, the intersecting ribs of the Vallinotto dome perform no structural work other than to bear their own weight.¹⁰⁸ They are essentially a scenographic conceit, a theatrical device whose sole purpose is to generate playful, novel, and illusionistic effects.¹⁰⁹ In short, Vittone employed the network of interlaced ribs at the Visitazione in the service of religious theater.

In their role as free-spanning members, the interlaced ribs of Vittone's dome are very similar in conception, if not in form, to the free-spanning arches of the pseudo-gallery of Juvarra's Carmine, a building completed just two years before the Visitazione was begun. Vittone, in effect, transformed the

¹⁰⁶ On the connection between the dome of the Visitazione and the dome of San Lorenzo, see OLIVERO, *Le opere*, p. 72; BRICARELLI, "Bernardo Antonio Vittone," p. 233; RODOLFO, "L'architettura barocca," p. 137; MILLON, "Alcune osservazioni," p. 149; IDEM., "Vittone," *Architectural Review*, p. 98; IDEM., "Vittone," in *Macmillan Encyclopedia*, p. 343; PORTOGHESI, "Metodo e poesia," p. 100; IDEM., *Bernardo Vittone*, p. 98; ARGAN, "Bernardo Vittone," *Il Messaggero*, p. 3; PEROGALLI, "Nota sull'architettura," p. 878; CARBONERI, "Guarini ed il Piemonte," p. 356; PASSANTI, "Per Bernardo Vittone," p. 6; GIUDICI/MEMOLI, *La architettura*, p. 279; and MEEK, *Guarino Guarini*, p. 157. On the connection between the dome of the Visitazione and the dome of the Sindone, see PASSANTI, "Per Bernardo Vittone," p. 6. On the connection between the dome of Visitazione and the proposed dome for the unbuilt church of the Padri Somaschi, see RODOLFO, "L'architettura barocca," p. 138.

¹⁰⁷ Vittone employed the triple-shelled dome only once, at Vallinotto. Never again would he stack so many shells atop one another, making the Visitazione unique among his buildings. On the uncharacteristic nature of the Visitazione dome within Vittone's *oeuvre*, see CAVALLARI MURAT, "L'architettura sacra," pp. 44-45; POMMER, *Eighteenth-Century*, p. 111; LUSSO, *Carignano: i "luoghi pii"*, p. 355. See also RODOLFO, "L'architettura barocca," p. 186; and L. MALLÉ, *L'arti figurative in Piemonte dalle origini al periodo romantico* (Turin, 1961), p. 297.

¹⁰⁸ On the brick construction of the interlaced ribs, see MILLON, "Vittone," *Architectural Review*, p. 101.

¹⁰⁹ PORTOGHESI, *Bernardo Vittone*, p. 100.

two-dimensional plane of free-spanning arches at the Carmine into a three-dimensional lattice of free-spanning ribs at the Visitazione.¹¹⁰ The free-spanning arches of Juvarra's church and the free-spanning ribs of Vittone's church both function as screens, and they both serve the same purpose — to blur spatial boundaries and accentuate scenographic effects.

The dome of the Visitazione springs not from an annular cornice, but directly from the piers. By eliminating any suggestion of a horizontal caesura Vittone emphasized the vertical continuity of architectural elements, which customarily are horizontally distinct from one another.¹¹¹ Vittone thereby imparted a marked sense of lift and levity to the dome. The vertical unification of structure and space is a central theme of Vittone's art, one that he continued to develop throughout the course of his practice.¹¹² It is a theme inspired not by Guarini, however, but by Borromini. It had been Guarini's practice to isolate the component parts of the building — piers, arches, pendentives, drum, dome, and lantern — into distinct horizontal zones.¹¹³ Guarini invariably treated the interlaced ribbed dome as an independent element distinct from the structural supports of the building below. Vittone emulated this in his design for a parish church to be erected "in some very conspicuous place," isolating the interlaced ribbed dome from the body of the church below. Such a horizontal stratification of the dome is atypical of

¹¹⁰ WITTKOWER, *Art and Architecture*, p. 427.

¹¹¹ MILLON, "Vittone," *Architectural Review*, p. 101.

¹¹² See WITTKOWER, *Art and Architecture*, p. 427; and MILLON, "Vittone," *Architectural Review*, p. 101.

¹¹³ See WITTKOWER, *Art and Architecture*, pp. 408-409, 427.

Vittone's *oeuvre*, however, and is further proof that this project was designed at an early date in his practice.

Beginning with the Visitazione at Vallinotto, Vittone began to rethink the interlaced ribbed dome and its relation to the supporting structure. He retained the diaphanous quality of Guarini's domed churches, but jettisoned the horizontal stratification of building segments in favor of a tight, vertical integration of piers and ribs. In this he was largely inspired by the example of Borromini's architecture, in particular the Re Magi Chapel. Vittone's predilection for the vertical integration of structure and space is explained in part by the architect's early association with Plantery and Juvarra, both of whom were keen to achieve in their architecture a similar vertical integration of building components. For example, Plantery's Palazzo Saluzzo Paesana and Palazzo Cavour in Turin, as well as Juvarra's Superga, Sant'Andrea at Chieri, and unexecuted projects for San Raffaele and the Duomo Nuovo in Turin — buildings and projects with which Vittone was familiar — all feature interior rooms characterized to a marked degree by a vertical continuity of structure and space that itself reflects the influence of Borromini's architecture. Vittone himself defines the vault as an arcuated wall.¹¹⁴ It is a definition that presumes a continuity of structure from the floor to the apex of the vault, and one that, in any case, deems the vault to be integrally united with the wall below, and not distinct from it.

The vertical integration of structure and space at Vallinotto is reinforced by the perspectival device of the slanted down entablature.¹¹⁵ As

¹¹⁴ VITTONI, *Istruzioni elementari*, p. 500: "Le volte sono muri arcuati..."

¹¹⁵ See PORTOGHESI, *Bernardo Vittone*, p. 97.

explained above, this entablature is not a horizontal member as the spectator is accustomed to seeing, but one that inclines downward as it sweeps away from the center of the church in a manner that makes the side chapels appear deeper and higher than they actually are. The slanted down entablature works effectively with the many other scenographic devices that Vittone employed in the church to generate a convincing illusion of spatial extension.

The Visitazione at Vallinotto was begun in 1738, the decade in which Vittone's interest in the perspectival window was at its keenest (Figures 2.11-2.13). Vittone had designed the perspectival window for the first time in his *Concorso Clementino* project of 1732. There it appears in combination with the interlaced ribbed vault, which also appears for the first time in his work, although both motifs are treated as minor, secondary features entirely unrelated to one another. At Vallinotto, Vittone again combined the perspectival diminution with an interlaced ribbed dome; only in this case the two motifs are prominent features of the design and work closely together to achieve a sustained and unified illusionistic effect. After 1738 Vittone would continue to make use of both the perspectival motif and the interlaced ribbed dome, but never again in combination or in such a forceful and persuasive manner.¹¹⁶

The exterior of the Visitazione as it looks today is comprised of three superimposed tiers or stories capped by a lantern, each storey narrower and shorter than the one below. The pagoda-like diminution of stories reflects Guarini's influence, particularly that of his centrally planned projects for the

¹¹⁶ CAVALLARI MURAT, "L'architettura sacra," pp. 44-45, argues that interlaced ribbed vaults ultimately did not profoundly interest Vittone who, in the end, was too tied to the expressive means of the eighteenth century to adhere closely to them. For this reason, he concludes, the Sanctuary at Vallinotto is not representative of Vittone's art. Executed at a particularly early stage of his practice, it was a point of departure, he argues, not an end.

Sanctuary at Oropa and San Gaetano at Nice.¹¹⁷ The classicist detail, on the other hand, reflects Juvarra's influence, particularly that of Stupinigi.¹¹⁸ The present exterior of the Visitazione, however, conforms to neither Vittone's original design nor the original construction of the church. Restoration work undertaken by the *Indendenza alle Belle Arti* in 1966 has revealed that the uppermost storey or drum is a later addition and that the inner hemispherical dome, presently enclosed by the drum, served for a time as its own external covering (Figure 4.45).¹¹⁹ The restoration work revealed the extrados of the hemispherical dome to be covered with finely set majolica tiles of vivacious colors — yellows, greens, blues, oranges — obviously meant to be seen in their own right. These tiles were exposed to the elements for a number of years as proven by the signs of weathering that they display (especially in the zone exposed to the north) and by indications of various repairs.¹²⁰ In other words, the exterior of the Visitazione was originally constructed very much as it is illustrated in *Istruzioni diverse*, that is to say with a rounded external dome perforated by dormer windows and capped by a cylindrical lantern.¹²¹

¹¹⁷ WITTKOWER, *Art and Architecture*, p. 425, note 60 on p. 565; MILLON, "Vittone," *Architectural Review*, p. 98; POMMER, *Eighteenth-Century*, p. 111, note 34 on p. 125.

¹¹⁸ WITTKOWER, *Art and Architecture*, p. 425.

¹¹⁹ See U. CHIERICI, "Vittone inedito," *Arte Lombarda* XV:1 (1970), pp. 105-108; IDEM., "La cupola del Vallinotto," in *Carignano. Appunti per una lettura della città*, 4 vols. (Carignano, [1978]), IV, pp. 67-71; LUSSO, *Carignano: i "luoghi pii"*, p. 356.

¹²⁰ CHIERICI, "Vittone inedito," p. 105; IDEM., "La cupola," p. 67, figs. 68-69. The tile enamel exhibits abrasions apparently caused by the sustained action of water and frost. Evidence of rebuilding is confirmed by the rough grooves cut into the dome at the base of the lantern to receive the heads of the rafters that support the present day drum. Evidence of rebuilding is further confirmed by the casual and imprecise cutting of the majolica tiles surrounding the original dormer windows that were remodeled on the exterior.

¹²¹ VITTORE, *Istruzioni diverse*, pl. 76. The hemispherical dome perforated by dormer windows is the same type that Vittone designed for his unexecuted project for Santa Chiara at Alessandria.

Something of the original appearance of the dome, particularly its hemispherical profile and polychrome majolica tiles, is suggested by the dome of San Giuseppe at San Damiano d'Asti (1715), itself now partially obscured by the subsequent addition of a superimposed drum and lantern.¹²²

The exterior of the Visitazione in its present form is the result of alternations made to the original building.¹²³ Giacomo Rodolfo, without citing his source, dates the remodeling of the exterior to Napoleonic times.¹²⁴ Umberto Chierici, on the other hand, concludes that the remodeling probably took place sometime between 1744 and 1749 when Vittone was again in Carignano at work on the Ospizio di Carità commissioned by Antonio Facio, the same client who originally had commissioned the Visitazione.¹²⁵ Still, Chierici admits the possibility that the drum may have been added at a later time, in 1821, for example, when the campanile was restored and perhaps even reconstructed.¹²⁶ Indeed, the pilasters and other details of the remodeled drum reveal a stiff and rigid treatment that bears a certain formal resemblance

¹²² See PROLA/PEYROT, *Architetture Barocche*, un-numbered page (listing under S. Damiano d'Asti). Other examples that survive include the campanile of San Giovanni a Sale at Alessandria; see CHIERICI, "Vittone inedito," p. 107, note 6 on p. 108. Brightly colored majolica tiles are also found in the dome interior of Michelozzi's Portinari Chapel in Sant'Eustorgio in Milan (begun 1462); see GITLIN BERNSTEIN, "Science," pp. 33-44.

¹²³ The Visitazione is not the only one of Vittone's churches whose design as illustrated in *Istruzioni diverse* differs from its final form as built. The designs as illustrated in his treatise for Santa Chiara at Bra, Santa Maria Maddalena at Alba, and the chapel of the Ospizio di Carità at Carignano also vary from their final versions as constructed; see CHIERICI, "Vittone inedito," p. 106; and IDEM., "La cupola," p. 67. However, it is clear that, unlike the changes to these other churches that apparently were made before or during the course of construction, the changes to the Visitazione took place after the building was constructed.

¹²⁴ RODOLFO, "L'architettura barocco," p. 138.

¹²⁵ CHIERICI, "Vittone inedito," p. 107; IDEM., "La cupola," p. 71.

¹²⁶ IDEM., "Vittone inedito," p. 108; IDEM., "La cupola," p. 71. The date of the early nineteenth-century restoration is recorded on the keystone of one of the arches of the campanile.

to that of the campanile. A late date for the remodeling of the exterior dome is also indicated by the noticeable weathering of the original majolica tiles that would have taken some time to effect. Further evidence of a late date is provided by Vittone himself who states in *Istruzioni diverse* that the exterior of the church is divided into two orders or stories, a reference to the original two-storey structure that apparently was still intact at the time Vittone's treatise was published in 1766, more than two decades after the original construction on the Visitazione would have been completed.¹²⁷

Begun in 1738 just one year after the posthumous publication of Guarini's *Architettura civile* and just two years after Juvarra's death, the Visitazione at Vallinotto marks, after several less than satisfactory attempts, Vittone's first comprehensive synthesis of Guarini and Juvarra's art. Here Guarinesque and Juvarresque elements are no longer merely juxtaposed, as they are in Vittone's *Concorso Clementino* project and in his project for a parish church "in some very conspicuous place," but fused in an original and convincing synthesis. Vittone's successful integration of Guarinesque and Juvarresque elements at Vallinotto was made possible by several factors. In the first place, it was due to Vittone's familiarity with the working methods of both masters, Guarini and Juvarra, a familiarity gained from having edited the architectural treatise of the one master and having apprenticed under the other. In the second place, it was due to the underlying compatibility of Juvarra's late works with Guarini's architecture, a compatibility without

¹²⁷ VITTONI, *Istruzioni diverse*, p. 186: "Forma questa Chiesa nell' esterno, siccome scorger si può dall' alzata, due Ordine, o Piani, de' quali espressa resta ivi insieme la metà della Pianta."

which no synthesis was possible, and one that Vittone recognized and was keen to exploit.¹²⁸

Closely related to the Visitazione is the unexecuted project for Santa Chiara at Alessandria, the first of five church commissions Vittone received from the Clarissan nuns (Figures 4.48-4.49). Vittone explains in *Istruzioni diverse* that he conceived the project for an irregular site of insufficient size.¹²⁹ For this reason he withdrew the presbytery into the cove of the choir and made the side corridors wide and commodious enough for the nuns to see the presbytery without themselves being seen by others in the church.¹³⁰ He also tells us that he perforated the pendentives in order that the church be filled with light, a light that was impossible to procure from elsewhere.¹³¹ The basic design problem that Vittone faced at Santa Chiara then was how to maximize both space and light in a cramped and dark pre-existing space, a problem that he solved by extending the presbytery, widening the side corridors, and perforating the pendentives.

The dome of Santa Chiara is a multi-shelled, perforated structure, its inner shell comprised of six intersecting ribs that, like those of the ribs of the

¹²⁸ POMMER, *Eighteenth-Century*, p. 111: "...only the underlying compatibility of Juvarra's late works with Guarini's architecture can explain their successful integration at Vallinotto."; TAVASSI LA GRECA, *Bernardo Antonio Vittone*, p. 5: "...il Vittone abbia soprattutto inteso che le posizioni del Guarini e dello Juvarra, solo apparentemente in contrasto, costituiscano i due poli di una stessa tendenza..."

¹²⁹ VITTONI, *Istruzioni diverse*, p. 184, pl. 71: "Egli è ideato sopra un sito irregolare, e d'insufficiente grandezza..."

¹³⁰ IBID., p. 184: "...e però opportuno parvemi il ripiego d'avanzarne, come ivi vedesi, il Presbiterio nel seno del Coro, disponendone a' di lui lati li Comunicatoj, che restando assai ampj, comoda dar postono, e libera a dette M.M. la vista del Presbiterio, senza esser vedute da chi si trova in Chiesa."

¹³¹ IBID., p. 184: "Cosa trovai pure in questo caso opportuna il fare aperte le Vele, per dare col mezzo di tale aperture al Vaso della Chiesa quel compimento di luce, che altronde procacciarvi restava affatto impossibile."

innermost shell of the Visitazione dome, trace out a Star of David in plan on the models of Guarini's presbytery vault of San Lorenzo, the presbytery vault of his church project for the Consolata in Turin, and the dome of his church project for the Padri Somaschi in Messina. It is identical to the dome of the Visitazione except that it is composed of two instead of three shells. The webbing of the inner shell, like the one of the Vallinotto dome, is completely eliminated leaving only an armature of free-spanning ribs that functions as a scenographic screen through which the outer shell is viewed from below. The intrados of the outer shell, again like the one of the Vallinotto dome, is covered with painted figures of angels. The celestial glory in the dome is repeated on the main altar where a painted image of a female figure, presumably St. Clare or perhaps the Madonna, is surrounded by depictions of angels in flight.¹³² The reduction of the dome to two shells, had it been built, would have produced a slightly different character of light from that engendered by the dome of the Visitazione. By eliminating the intermediate shell, which at the Visitazione completely conceals the exterior windows from the view of the spectator below, Vittone partially reveals the source of light. Still, the proposed armature of free-spanning ribs is sufficient to have impeded and modulated the flow of light coming from the dormer windows above.

The plan of Santa Chiara is a triangular-hexagon with alternating concave and convex niches, the concave niches given over to chapels and the convex ones to *coretti* and the entrance. It is the same formula that Vittone used at Vallinotto, but with the triangular configuration more emphatically

¹³² According to PORTOGHESI, *Bernardo Vittone*, p. 101, the image is that of the Madonna.

articulated. The chapels are oval in plan, with the main chapel rounder and larger than the others. The main chapel is also terminated on axis by an apsidal screen of columns that opens onto a choir behind. The choir is no longer a tight narrow space like the one at Vallinotto, but a major space in its own right covered by a wide annular vault and comparable in its scenographic effect to the screened apsidal spaces of some of Benedetto Alfieri's churches.¹³³ Both the dome and the presbytery of Santa Chiara then are delimited, just as they are in the Visitazione, by layered screens beyond which space is expanded in an incalculable dimension.¹³⁴ They constitute in architectural as well as in psychological terms, again just as they do in the Visitazione, the twin spiritual centers of the church.

Unlike the Visitazione, Santa Chiara was not designed as an isolated freestanding building. Instead, it is embedded within a pre-existing monastic complex, much closer in this respect to Guarini's San Lorenzo and Sardi's Santa Maria del Rosario than to the Visitazione. Consequently, the exterior does not have a pagoda-like stacking of tiers or stories, although the exterior dome with its rounded profile, cylindrical lantern, and dormer windows is similar in type to the dome of the Visitazione as designed and originally constructed. Santa Chiara also differs from the Visitazione in having an interior annular cornice upon which the ribs of the dome spring. This cornice creates a distinct horizontal caesura between the supporting arches below and the drum and dome above. It is a feature that was derived from the Sindone and other centrally planned churches and church projects by Guarini.

¹³³ IBID., p. 102.

¹³⁴ IBID., p. 101.

Another feature of the project for Santa Chiara, the perforated pendentives, were also derived from the Sindone. Consequently, Vittone's project for Santa Chiara is more Guarinesque in its articulation than the Visitazione. The project for Santa Chiara is undated but its pronounced Guarinesque character marks it as an early design drawn up sometime during the mid-1730s.¹³⁵

In 1742 Vittone designed yet another church that combines an interlaced ribbed dome with a hexagonal floor plan. It is his unexecuted project for Santa Chiara in Turin, the first of two proposals for the commission, recorded in a plate in *Istruzioni diverse* and in four preparatory drawings conserved in the Archivio di Torino.¹³⁶ The interlaced ribbed dome is hardly visible in the half-section of the plate in the treatise (Figure 4.50), but is clearly discernable in the full section illustrated on one of the drawings (Figure 4.51). The dome proper is comprised of two domical shells and a

¹³⁵ The date of Vittone's project for Santa Chiara at Alessandria is unknown. However, the striking parallels between it and the Visitazione at Vallinotto (1738-39), particularly in plan, structure, and lighting effects, suggest to MILLON, "Alcune osservazioni," p. 150, a certain contemporaneous relation. Millon argues that Santa Chiara, owing to the somewhat greater elaboration of its plan, was designed later than the Visitazione and thus must be dated sometime after 1738, but no later than 1740 since the project is neither as structurally nor spatially advanced as either one of Vittone's churches of San Bernardino at Chieri (1740-44) and Santa Chiara at Bra (1742-48). Millon therefore assigns a date of 1738-40 to the project for Santa Chiara at Alessandria, a date accepted by CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 58, no. 141. But see, POMMER, *Eighteenth-Century*, p. 112, who dates the project to 1742-43. I argue for an earlier date. The stark Guarinesque character of the project for Santa Chiara at Alessandria with its horizontal stratification of elements (similar in this respect to his Guarinesque project for a parish church "in some very conspicuous place") suggests a date of about 1736-37, just as Vittone was completing his editing of Guarini's *Architettura civile*, but before he began the church at Vallinotto, which, by comparison, is more Borrominian in nature with a greater vertical unification of elements (a characteristic of his mature work).

¹³⁶ VITTONI, *Istruzioni diverse*, pl. 70; Archivio di Torino, Sezione di Corte, e Sezione Finanze. The drawings are published by A. LANGE, "Disegni originale di Bernardo Vittone per la chiesa e Monastero di Santa Chiara di Torino," in Viale, ed., *Bernardo Vittone e la disputa*, II, pp. 301-312, figs. 1-4. The drawing that depicts the section showing the interlaced ribbed dome is unsigned and undated, but one of the companion drawings, depicting the plan, is signed by Vittone and dated 28 September 1742. See also CARBONERI, "Guarini ed il Piemonte," pp. 358-359; TAMBURINI, *Le chiese*, pp. 367-370; N. GENINATTI SATE, "La chiesa di Santa Chiara di Torino di Bernardo Antonio Vittone," Thesis, Università degli Studi di Torino, Turin, 2002, a source I was unable to consult; and BENEDETTO/BENEDETTO, *La luce ha mani*, pp. 48-53.

lantern, stacked one atop the other in a Guarinesque manner to form a pagoda-like exterior. The interlaced ribs do not occupy the lower shell as they do in the domes of the Visitazione at Vallinotto and the project for Santa Chiara at Alessandria, but the upper shell. The ribs are again six in number and trace out a Star of David in plan, but they no longer form a separate independent lattice. Instead, they are affixed directly to the intrados of the vault, the webbing of which is now intact but still sufficiently cut away by windows to produce an open structure capable of admitting abundant light. The theme of the vertical continuity of line is given emphatic expression by the elimination of the annular cornice and the consequent unimpeded rise of the attenuated piers into the ribs of the dome. The hexagonal plan is likewise simplified (Figure 4.50). There is no longer an alternation of concave and convex niches. Rather, the convex niches are eliminated altogether leaving only concave ones. Consequently, the triangular articulation that is so prominent in the plans of the Visitazione and the project for Santa Chiara at Alessandria is mitigated here, leaving only the pure geometry of the hexagon.

Vittone's project for Santa Chiara in Turin heralded a new chapter in the architect's *oeuvre*. The simplification of the dome and the plan, the reduced prominence of the interlaced ribs, the decreased number of masonry layers in the dome and the walls, the elimination of light chambers and concealed windows, the increased emphasis on direct as opposed to indirect lighting, are all characteristics of Vittone's late architecture, and they are brought together for the first time in this project which, however, was never built. Vittone's second project for Santa Chiara in Turin, the one that was erected, was built on an octagonal plan and dispenses with the interlaced ribbed dome altogether.

Like Guarini before him, Vittone reserved the bulk of his interlaced ribbed domes for churches. In 1740, however, he designed an interlaced ribbed vault for an atrium in a domestic building, the Ricovero dei Catecumeni at Pinerolo (Figure 4.19). Its ribs intersect one another in an orthogonal manner that, as Portoghesi observes, reflects a Guarinian taste.¹³⁷ Its ultimate source of inspiration, however, was the narthex vault of Sant'Evasio at Casale Monferrato with which Vittone was certainly familiar since five years earlier he had designed an unexecuted project for the Chapel of Sant'Evasio in the Cathedral of Casale Monferrato,¹³⁸ the very building in which the narthex vault is located.¹³⁹

Vittone also took the Sant'Evasio narthex vault as the model for the interlaced ribbed vault he designed for the renovated presbytery of Sant'Antonio Abate in Turin (ca. 1750, demolished 1830). Unfortunately, the church is now lost and Vittone's presbytery is known only through a description and plate in *Istruzioni diverse* (Figure 4.52).¹⁴⁰ The date of its design is not known with certainty, but according to Gaspare Craveri, who wrote just a few years after construction was completed, the renovation took place in 1750.¹⁴¹ Vittone explains in his treatise that the renovation was

¹³⁷ PORTOGHESI, *Bernardo Vittone*, p. 161: "...nell'atrio misurato dalle costole ortogonali di gusto guariniano."

¹³⁸ See N. CARBONERI, "Aspetti e problemi dell'arte a Casale dal barocco a neoclassicismo," in *Quarto congresso di antichità e d'arte* (Turin, 1974), pp. 375-394, here pp. 387, fig. 10; and IENI, "Quattro disegni," pp. 6-13, figs. 1-2.

¹³⁹ It is not clear whether Vittone traveled to Casale Monferrato at that time. According to POMMER, *Eighteenth-Century*, p. 123, Vittone made his first of three visits to Casale Monferrato in 1737 when he designed the Ospizio di Carità, a date, nevertheless, that itself also precedes the commissioning of the Ricovero dei Catecumeni.

¹⁴⁰ VITTONI, *Istruzioni diverse*, pp. 182-183, pl. 67.

¹⁴¹ G. CRAVERI, *Guida de' forestieri per la Reale Città di Torino* (Turin, 1753), p. 56: "Questa

necessary because the existing interior of Sant' Antonio Abate was totally devoid of light due to external encumbrances.¹⁴² The main problem was the thinness of the existing walls and the impossibility, given the narrowness of the site, of making them thicker.¹⁴³ In order that the walls not be burdened with excess weight, Vittone devised an interlaced ribbed vault that, he proudly observes, facilitates the desired lighting and is at the same time beautiful in form and lightweight in structure.¹⁴⁴ The form of the vault was thus determined by considerations of lighting, structure, and aesthetics.¹⁴⁵ It is a solution that is comparable in many ways to Gothic architecture.¹⁴⁶

Owing to its accommodation within a pre-existing structure, the presbytery vault of Sant' Antonio Abate was unique among Vittone's interlaced ribbed vaults. It rose from neither a hexagonal nor an octagonal base of support, but from a quadrangular one, and it capped not a centralized congregational hall, but a presbytery terminating a longitudinal nave.¹⁴⁷ In

Chiesa fu nuovamente abbellita nel 1750 di Cupola, Coro e Campanile." This is a source I was unable to consult, but cited in POMMER, *Eighteenth-Century*, p. 115, note 62 on p. 129. See also L. CIBRARIO, *Storia di Torino*, II (Turin, 1846), another source I was unable to consult, but cited in OLIVERO, *Le opere*, p. 86; and PORTOGHESI, *Bernardo Vittone*, p. 224.

¹⁴² VITTORE, *Istruzioni diverse*, p. 182: "La privazione totale di luce, in cui già si trovava il Presbiterio; e la poca, che ne godeva il Vaso della Chiesa a cagione degl' impedimenti esteriori, furono i motivi, per i quali si progettò tale riforma..." See also FAGIOLO, "L'universo," p. 133.

¹⁴³ VITTORE, *Istruzioni diverse*, pp. 182-183: "...nell' estettuazione del che, atteso la tenue grossezza, che vi si aveva de' muri della vecchia Chiesa, de quale d'uopo era servisi per la nuova, e l'angustia del sito, la quale non permetteva guari maggiore ne' luoghi opportuni il loro ingrossamento..." See also FAGIOLO, "L'universo," p. 133.

¹⁴⁴ VITTORE, *Istruzioni diverse*, p. 83: "...affine di non caricare di soverchio peso quella Fabrica, pensai dovermi, nel disporne la Cupola, valere della maniera, che ivi osservasi, con cui, oltre la bramata luce, conseguire insieme potessi, e la leggiadria della forma, e la leggerezza dell' Opera." See also FAGIOLO, "L'universo," pp. 133-134.

¹⁴⁵ CAVALLARI MURAT, "L'architettura sacra," p. 46; PORTOGHESI, *Bernardo Vittone*, p. 103; CARBONERI, "Attribuzioni," p. 289.

¹⁴⁶ OLIVERO, *Le opere*, p. 86; CARBONERI, "Attribuzioni," p. 289.

this latter respect, Vittone's vault anticipated Nicolis di Robilant and Buniva's presbytery vaults with intersecting ribs. Vittone's vault was comprised of four ribs that intersected one another at 90-degree angles to form a cruciform configuration. These ribs, however, unlike those of the Sant'Evasio narthex vault and its many derivatives, were not aligned in plan with the walls of the presbytery, but set diagonal to them at 45-degree angles. It is an arrangement that takes as its point of departure the diagonally disposed ribs of several of Guarini's schematic vault projects at Racconigi (Figure 4.14) and ultimately the bands of Borromini's basket vault of the Re Magi Chapel (Figure 4.3).

The renovated presbytery of Sant'Antonio Abate was informed by two Vittonian themes: the maximization of light and the vertical integration of structure and space. Eight attenuated piers arose from the crossing arches to support the ribs of the vault. An additional four piers were positioned at the corners of the drum to make a total of twelve piers. These twelve piers framed twelve tall windows, three windows to each of the four walls of the drum. The vault was punctured by a large, square, rotated oculus at its crown, and by eight smaller apertures inserted immediately above the keystones of the arches. The vault was capped by a lantern that itself was perforated on each of its four sides by an arched window. In short, the drum, vault, and lantern functioned as a veritable glass cage, to which hollowed-out pendentives were added to illuminate the corners as well as to facilitate the vertical continuity of line.

¹⁴⁷ Vittone's only other interlaced ribbed dome to rise from a quadrangular base, with the exception of his atrium vault in the Ricovero dei Catecumeni at Pinerolo, is the one he designed as part of his unexecuted project for a parish church "in some very conspicuous place."

After 1750 Vittone's interest in the interlaced ribbed dome began to fade. Only once or twice after having completed the presbytery of Sant'Antonio Abate did Vittone design an interlaced ribbed dome.¹⁴⁸ The first is his project of the late 1750s for the restoration of the dome of the parish church of San Germano at San Germano Vercellese (Figure 4.53). Vittone actually proposed two designs, the first a sterile reworking of Michele Richiardi's 1755 dome project with interlaced ribs, and the second a more traditional scheme with ribs converging towards the crown.¹⁴⁹ It is significant that Vittone recommended for construction not the version with interlaced ribs, but the one with converging ribs, and it is this latter version that was built.

There is also San Luigi Gonzaga at Corteranzo Monferrato, a Guarinesque church with an interlaced ribbed dome whose attribution to Vittone by Francesco Gamarino has won general acceptance (Figures 4.54-4.56).¹⁵⁰ Both its dome, a structure comprised of six ribs tracing out a Star of David configuration in plan, and its floor plan, a triangular-hexagon surrounded by alternating concave and convex niches, are very similar to the Visitazione at Vallinotto, and even more so to his unexecuted project for Santa Chiara at Alessandria. As in both the Visitazione and the project for Santa Chiara, the concave niches are reserved for the chapels while the convex ones are reserved for the *coretti* and the entrance. Moreover, as in the project for

¹⁴⁸ Already, the interlaced ribbed vault of Sant'Antonio Abate was atypical for its time, *IBID.*, p. 289.

¹⁴⁹ *IBID.*, pp. 286-289, fig. 17.

¹⁵⁰ F. GAMARINO, "Architettura barocca nel Monferrato," *Bollettino della Società Piemontese di Archeologia e Belle Arti* n.s. I (1947), pp. 116-127, here pp. 119-120; F. GAMARINO, A. PANIZZA, G. FANTINO, and R. GAMARINO, *S. Luigi Gonzaga di Corteranzo* (Turin, 1970). On San Luigi Gonzaga, see also CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 58, no. 140, pls. 137, 138-a; and BENEDETTO/BENEDETTO, *La luce ha mani*, pp. 26-31.

Santa Chiara, the concave niche sheltering the main altar is rounder and larger than the other two. San Luigi Gonzaga displays still other features that are found only in Vittone's project for Santa Chiara, namely the interior annular cornice, the perforated pendentives, and the projecting half-columns capped by broken inverted tympanae that frame the openings of each of the six niches. On the other hand, there are other features of San Luigi Gonzaga — its freestanding, isolated site in a rural region, its pagoda-like exterior of superimposed and diminishing tiers, and its vertex openings and light chambers that illuminate apsidal vaults of the interior — that more closely resemble the Visitazione.¹⁵¹ It is on the basis of these frequent and striking formal similarities to Vittone's church designs that Gamarino's attribution of San Luigi Gonzaga to Vittone has won acceptance. Still, the attribution is based entirely on stylistic grounds, unsupported by any surviving documentary records.

San Luigi Gonzaga was constructed in 1760, a date securely established by Gamarino on the basis of documents from the Curia of Casale Monferrato.¹⁵² For example, one of the documents, recording a pastoral visit on 9 July 1836, informs us that the plaque above the main door of the church bore at that time an inscription that read: "For the offering, the care, and the industry of pious persons, in the year 1760."¹⁵³ This inscription, still visible in

¹⁵¹ See MILLON, "Alcune osservazioni," p. 150.

¹⁵² GAMARINO, "Architettura barocca," p. 119; GAMARINO/PANIZZA/FANTINO/GAMARINO, "Documenti," in *S. Luigi Gonzaga*, pp. 3-25. These documents concern primarily the costs, bequests, and inventories regarding the furnishing and goods of the church.

¹⁵³ The original Latin inscription is recorded as: "PIORUM ELEMOSINIS / CURA ET LABORIBUS / ANNO MDCCLX." See GAMARINO, "Architettura barocca," p. 119; GAMARINO/PANIZZA/FANTINO/GAMARINO, "Documenti," in *S. Luigi Gonzaga*, pp. 19, 21; and IDEM., "S. Luigi: Definizione cronologica," in *S. Luigi Gonzaga*, p. 5.

the early nineteenth century, is no longer extant. Nevertheless, a construction date of 1760 is supported by the absence of any reference to the church in documents before that year.¹⁵⁴ The earliest document that contains a reference to San Luigi Gonzaga, albeit an indirect and ambiguous one, is dated 1761,¹⁵⁵ while the earliest document to specifically mention San Luigi Gonzaga by name is dated 16 July 1764.¹⁵⁶ From this latter document, a register recording a pastoral visit, we learn that the church was already constructed and consecrated at that time. After 1764 the documents consistently refer to San Luigi Gonzaga by name.¹⁵⁷

Henry Millon has argued that 1760 is far too late a date for Vittone to have produced at Corterano Monferrato a rather immature version of one of his earlier Guarinesque designs. Millon views the three works — the Visitazione at Vallinotto, the project for Santa Chiara at Alessandria, and San Luigi Gonzaga — as belonging to a single group, characterized by definite

¹⁵⁴ None of the records of pastoral visits to Corterano between 1728 and 1758 mention San Luigi Gonzaga. Instead, they name just two churches, the parish church of San Martino and the rural church of San Bernardo. Furthermore, they deliberately specify that no other chapels or domestic oratories are to be found in the region. A parish inventory of 1757, which names both San Martino and San Bernardo, also says nothing of San Luigi Gonzaga. Finally, no mention of San Luigi Gonzaga is made in the last will and testament of Carlo G. Giunipero, drawn up in 1746 and opened in 1757. See GAMARINO/PANIZZA/FANTINO/GAMARINO, "Documenti," in *S. Luigi Gonzaga*, pp. 3-7.

¹⁵⁵ The reference is ambiguous due to a correction made to the original text of the document. The document in question is a State of the Parish of Corterano which mentions both a parish church and a rural church but without identifying either one by name. The reference to the rural church was originally written as "della chiesa campestre," but was later corrected to "delle chiese campestre." The original reference to "della chiesa campestre" would indicate only one rural church, the pre-existing San Bernardo, while the corrected reference to "delle chiese campestre" would indicate several rural churches, San Bernardo and presumably the newly built San Luigi Gonzaga. That it was deemed necessary to make the correction to the text at all suggests that the new church of San Luigi Gonzaga was begun sometime during, or very soon after, the time when the document was being drafted. See *IBID.*, p. 9.

¹⁵⁶ *IBID.*, pp. 11-13.

¹⁵⁷ *IBID.*, pp. 13-25.

Borrominesque and Guarinesque features, all designed sometime around 1740.¹⁵⁸ He finds it inconceivable that in 1760 the architect who by that time had designed Santa Maria di Piazza (ca. 1751-54) and San Michele at Rivarolo Canavese (1758) could have returned to the simplicity of attitude characterized by the Visitazione (1738-39).¹⁵⁹ On this basis, Millon initially argued that Vittone both designed and erected San Luigi Gonzaga about 1740, the year after the Visitazione was completed.¹⁶⁰ Subsequently, Millon came to accept Gamarino's conclusion, firmly supported by documents, that San Luigi Gonzaga was constructed in 1760, but continued to argue nevertheless that it was designed in 1740, a twenty-year lapse between conception and execution for which he admittedly can give no adequate account.¹⁶¹ In concluding that San Luigi Gonzaga was designed in 1740 but not erected until 1760, Millon is in essential agreement with Carboneri who concludes that the design for San Luigi Gonzaga must have predated by many years its construction in 1760.¹⁶²

¹⁵⁸ MILLON, "Alcune osservazioni," p. 150.

¹⁵⁹ IBID., pp. 150-151. Millon later accepted the thesis, advanced by POMMER, *Eighteenth-Century*, pp. 117-119, that Vittone worked in two alternative coexistent stylistic veins during the late years of his practice, a conservative vein and a freer more innovative vein that, in Millon's words, help "to reveal the nature and complexity of Vittone's intent and achievement." See MILLON, Review of *Eighteenth-Century Architecture in Piedmont: The Open Structures of Juvarra, Alfieri and Vittone*, by R. Pommer, *The Art Bulletin* LIV:3 (September 1972), pp. 357-360, here p. 360. The conservative vein is characterized by Vittone's designs for San Salvatore at Borgomasino (1755), Sant'Ambrogio in Turin (1757), San Michele at Rivarolo Canavese (1758), and the Assunta at Riva di Chieri (1761), while the freer more inventive vein is characterized by his designs for the Assunta at Grignasco (1750-83) and San Michele at Borgo d'Ale (1770-80).

¹⁶⁰ IDEM., "Alcune osservazioni," p. 150.

¹⁶¹ IDEM., "La formazione," pp. 449-450.

¹⁶² CARBONERI, "Attribuzioni," p. 289. Carboneri reaches his conclusion on the basis of Vittone's tired and uninspired reworking of Richiardi's design for an interlaced ribbed vault in San Germano at San Germano Vercellese (1755), a strong indication that Vittone had lost interest in the interlaced ribbed dome during the years of his mature practice.

Millon's conclusion has been challenged by Francesco Gamarino and his colleagues, Alda Panizza, Giovanni Fantino, and Raffaella Gamarino, who do not see why, on stylistic grounds, the design for San Luigi Gonzaga must be dated to 1740 since there is nothing, in their estimation, to preclude Vittone from having returned to an earlier mode of expression at a late point in his career.¹⁶³ After all, they argue, it was Vittone's accustomed practice throughout his career to return to previous themes.¹⁶⁴ Gamarino and his colleagues hold that San Luigi Gonzaga was designed not in 1740, but in 1760, the same year that it was constructed. As for the conservative Guarinesque character of the design, they suggest that it may have been due to a specific request from members of the aristocratic Giunipero family who commissioned it, a request that Vittone dutifully discharged by returning to an outdated theme from the distant past.¹⁶⁵ Thus Gamarino and his colleagues do not dispute Millon's assertion that the general style of San Luigi Gonzaga belongs to Vittone's early *oeuvre*, but they argue that Vittone nevertheless produced an entirely new design in 1760 based on his early *oeuvre*.

Gamarino and his colleagues also point to stylistic evidence that identifies San Luigi Gonzaga as a late rather than an early design. They note that the curved hooded moulding that caps the oculus positioned above the church's entrance is detailed very much like the curved moulding that caps the oculus in the façade of Vittone's parish church of the Assunta at Riva di

¹⁶³ GAMARINO/PANIZZA/FANTINO/GAMARINO, "S. Luigi 'Misurato,'" in *S. Luigi Gonzaga*, pp. 46-47; IDEM., "S. Luigi: Definizione cronologica," in *S. Luigi Gonzaga*, p. 10.

¹⁶⁴ IDEM., "S. Luigi: Definizione cronologica," in *S. Luigi Gonzaga*, p. 10.

¹⁶⁵ IDEM., "S. Luigi 'Misurato,'" in *S. Luigi Gonzaga*, p. 47.

Chieri (1761).¹⁶⁶ Moreover, the façade and external contour of San Luigi Gonzaga are all, in their judgment, more formally advanced than that of the Visitazione.¹⁶⁷ The most telling evidence, however, is the simplified dome comprised of a single closed shell with the interlaced ribs affixed to it and no longer forming an open lattice independent of the shell as in the domes of the Visitazione at Vallinotto and the project of Santa Chiara at Alessandria, a treatment that is uncharacteristic of Vittone's early production of the 1730s and 1740s, but wholly consistent with his late work of the 1760s.¹⁶⁸ The interlaced ribs of San Luigi Gonzaga are in fact flat decorative bands much closer in this respect to those of Nicolis di Robilant's domes of the 1750s and 1760s than to those of Vittone's own domes of the early 1740s. Also, the drum of San Luigi Gonzaga is a dwarf drum, unlike the tall, amply fenestrated drum intended for Santa Chiara at Alessandria. Moreover, there is no fresco painted on the dome and no gilt stucco rays emanating from perforations as there are

¹⁶⁶ IDEM., "S. Luigi: Definizione cronologica," in *S. Luigi Gonzaga*, pp. 16-17; IDEM., "S. Luigi 'Misurato,'" in *S. Luigi Gonzaga*, p. 45. Window mouldings of this type were a staple of eighteenth-century Piedmontese architecture; see BRINCKMANN, *Theatrum Novum*, pl. 92A; CARBONERI, *L'architetto Francesco Gallo*, pls. 32, 35, 48, 56; IDEM., "Architettura," in *Mostra del Barocco*, I, pls. 131, 156-a; and PORTOGHESI, *Bernardo Vittone*, pl. 264.

¹⁶⁷ GAMARINO/PANIZZA/FANTINO/GAMARINO, "S. Luigi: Definizione cronologica," in *S. Luigi Gonzaga*, pp. 14-15, 18-19.

¹⁶⁸ IBID., pp. 20-21. San Luigi Gonzaga is only 16 meters high, a measurement given by GAMARINO, "Architettura barocca," p. 120; and MILLON, "Alcune osservazioni," p. 150, and thus its diminutive size alone would have precluded the erection of an elaborate system of multi-shelled vaults. Still, San Luigi Gonzaga is no smaller than the Visitazione whose dimensions, as given by PASSANTI, "Per Bernardo Vittone," p. 5, are 15 meters tall and 9 meters wide. Gamarino makes two additional points to explain the single shell construction of the San Luigi Gonzaga dome. First, he supposes that the Giunipero family obliged Vittone to draw up the plans of the church in a very short time, and without too much elaboration, thus precluding a double shell construction. Second, he supposes that Vittone did not visit the construction site himself but, on account of the church's modest dimensions, left its superintendence to subordinates who, presumably, were ill qualified to oversee the construction of a multi-shelled dome, for which reason Vittone designed a single shelled one. On the simplified character of the Corteranzo dome versus the complex character of the Vallinotto dome, see PEROGALLI, "Nota sull'architettura," p. 879.

at the Visitazione, the project for Santa Chiara, and other early Vittonian churches, including San Bernardino at Chieri and Santa Chiara at Bra. Rather, the elimination of multiple shells and illusionistic fresco work, and the chastening of stuccowork, is characteristic of Vittone's late architecture as manifest, for example, in San Michele at Buttigliera d'Asti (1758) and the parish church of Santa Maria dell'Assunta at Riva di Chieri (1761).¹⁶⁹ Finally, the presbytery of San Luigi Gonzaga is terminated by a simple apse without an apsidal screen of columns as occurs at both the Visitazione and the project for Santa Chiara at Alessandria. In other words, the design for San Luigi Gonzaga, notwithstanding its interlaced ribbed dome and pronounced Guarinesque character, is largely devoid of the key scenographic features that typify Vittone's centrally planned church designs of the early 1740s.

Still, the Guarinesque character of San Luigi Gonzaga is indisputable and cannot be made easily to square with the late date of construction.¹⁷⁰ If, as Carboneri asserts, Vittone's enthusiasm for the interlaced ribbed dome had dissipated by the mid-1750s, then how does one account for the erection in 1760 of San Luigi Gonzaga, one of the most Guarinesque churches of Vittone's

¹⁶⁹ GAMARINO, "Architettura barocca," p. 120.

¹⁷⁰ Besides the interlaced ribbed dome, there are several other Guarinesque features present in San Luigi Gonzaga that Vittone had long abandoned by 1760, notably the perforated pendentive and the emphatic triangulation of the hexagonal plan. Vittone's experimentation with the perforated pendentive was limited for the most part to the early years of his practice, from the early 1730s until the mid-1740s, after which time he employed only the hollowed-out pendentive which itself no longer appears in Vittone's architecture after 1755. Vittone designed churches with hexagonal plans over the course of his entire practice, but the ones characterized by a pronounced triangular geometry were limited generally to the early phase of it. After 1750 Vittone abandoned the triangular articulation, emphasizing instead the regular hexagonal geometry of the plan and substituting the alternation of concave and convex niches around the core with a simple and regular sequence of concave niches. In short, the perforated pendentives and the triangular-hexagonal plan of San Luigi Gonzaga are throwbacks to Vittone's early work, just as the interlaced ribbed dome is, and are not to be found in Vittone's architecture after 1750.

oeuvre?¹⁷¹ Neither Millon's explanation that Vittone in 1760 oversaw the construction of a 20-year-old design, nor Gamarino's explanation that Vittone in 1760 drew up an entirely new but antiquated Guarinesque design, is satisfactory. Millon cannot adequately explain why Vittone should have consented to resurrect for construction a previously devised design, and Gamarino cannot adequately explain why Vittone should have conceived an entirely new design, but one which, by the standards of 1760, was clearly outmoded in style. How to account for the difficulty?

Perhaps it stems from Gamarino's original attribution of San Luigi Gonzaga to Vittone, an attribution that is widely accepted but that may be in need of reexamination. It is an attribution founded entirely on stylistic grounds, unconfirmed by documentation of any sort. None of the archival documents pertaining to San Luigi Gonzaga mentions Vittone (nor for that matter any other architect). Moreover, Vittone himself is completely silent about the church, making no reference to it in *Istruzioni diverse* where one would expect to find one. Still, it is undeniable that the design for San Luigi Gonzaga is closely linked to Vittone's project for Santa Chiara at Alessandria.

¹⁷¹ CARBONERI, "Attribuzioni," p. 289. In one important respect San Luigi Gonzaga is decidedly more Guarinesque than either the Visitazione or the project for Santa Chiara at Alessandria, namely in its stepped pagoda-like exterior ultimately derived from Guarini's project for the Sanctuary at Oropa; see MILLON, "Vittone," *Architectural Review*, p. 98. The lantern of San Luigi Gonzaga is particularly Guarinesque. In contrast to the cylindrical lanterns that crown the domes of the Visitazione and the project for Santa Chiara, it is a hexagonal block that, true to Guarini's practice, is rotated with respect to the dome below. It undoubtedly was due to its Guarinesque character that San Luigi Gonzaga was attributed to Guarini by G. CASALIS, *Dizionario geografico-storico-statistico-commerciale degli Stati di Sua Maestà il Re di Sardegna*, 28 vols. (Turin, 1839), V, p. 462, a source I was unable to consult, but cited in GAMARINO/PANIZZA/FANTINO/GAMARINO, "S. Luigi 'Misurato,'" in *S. Luigi Gonzaga*, p. 10, note 1 on p. 12; and IDEM., "S. Luigi: Definizione cronologica," in *S. Luigi Gonzaga*, p. 3, an attribution which is now discredited. On the pronounced Guarinesque character of San Luigi Gonzaga, see also CARBONERI, "Guarini ed il Piemonte," p. 357; POMMER, *Eighteenth-Century*, p. 112, note 39 on p. 126; PORTOGHESI, *Bernardo Vittone*, pp. 99-100; and MEEK, *Guarino Guarini*, p. 158.

This, in the final analysis, is the basis of Gamarino's attribution and its wide acceptance since it is certain that San Luigi Gonzaga was modeled directly after Vittone's project for Santa Chiara, a project that in the year 1760 was still unpublished and as yet unknown to the general audience of architects. Presumably then only Vittone could have been in the position at that time to translate elements from the one design to the other.

There was, however, another architect besides Vittone who in 1760 was familiar with the project for Santa Chiara, and that architect was Vittone's assistant, Mario Ludovico Quarini. Quarini had joined Vittone's workshop in 1759, just one year before San Luigi Gonzaga was constructed, and there he remained working and collaborating with Vittone until the latter's death in 1770.¹⁷² In 1760 Quarini was charged by Vittone to delineate the designs illustrated in Vittone's unpublished treatise, "*L'architetto civile*," presently conserved in the Biblioteca Reale in Turin.¹⁷³ Quarini's drawings later served as the basis for the engraved plates published in *Istruzioni diverse*, also incised by Quarini among others.¹⁷⁴ In this way Quarini gained first hand knowledge

¹⁷² Vittone appears to have met Quarini as early as 1757 in Chieri where both were at work on the Chapel of the Madonna delle Grazie in the Cathedral. See OLIVERO, "La Cappella," pp. 18-19, who publishes records of payments made to both architects during the spring and summer of 1757. See also CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 81; PORTOGHESI, *Bernardo Vittone*, p. 227; and G. VANETTI, *Cappi Mastri e Maestranze nei cantieri del Vittone e del Quarini* (Chieri, 1992), a source I was unable to consult. Quarini was but one of many assistants who worked in Vittone's studio over the years. Others included Giovanni Battista Borra (who worked there from 1733 to 1736), Tomaso Guerrino, Pietro Bonvicini, Giacomo Maria Contini, and Giovanni Battista Galletto (who worked there from 1750 to 1770); see RODOLFO, "Notizie inedite," pp. 449, 451; CAVALLARI MURAT, "Alcune architetture," pp. 3-4; IDEM., "Aggiornamento," p. 479, note 1; CARBONERI, "Prodromi," pp. 43-52; IDEM., "Architettura," in *Mostra del Barocco*, I, p. 78; BAUDI DI VESME, *Schede Vesme*, I, pp. 177-178; BRAYDA/COLI/SESIA, "Ingegneri," p. 114; CANAVESIO, "Anni di apprendistato," pp. 365-381; and ZOLLER, *Der Architekt*, pp. 25-29.

¹⁷³ The date of Vittone's treatise is recorded in the title: "*L'architetto / civile / volume originale / delle opere / del signor / Bernardo Vitone [sic] / insigne allievo / dell' Accademia di Roma / del MDCCLX*." See CARBONERI, "Appunti," p. 59.

of Vittone's designs for both the Visitazione and the project for Santa Chiara at Alessandria, both of which are illustrated in "L'architetto civile" and *Istruzioni diverse*. Quarini actually drew two versions of the Visitazione for "L'architetto civile," one a section of the church with its fresco work, the other a section without it (Figure 4.41). In other words, Quarini was producing detailed drawings of both the Visitazione and the project for Santa Chiara during the very year when San Luigi Gonzaga was undergoing construction.¹⁷⁵

In addition, Quarini collaborated with Vittone on a number of architectural projects during the 1760s. In 1761, for example, he collaborated with him on the restoration of the Arch in honor of Emanuele Filiberto at Chieri. That year he also collaborated with Vittone on the façade of San Francesco d'Assisi in Turin.¹⁷⁶ Two designs for the façade, split and juxtaposed side by side, one by Quarini and one by Vittone, are illustrated on a sheet conserved in the Museo Civico in Turin, each design signed by its architect. Interestingly, it was Quarini's design and not Vittone's that was built. Quarini also collaborated with Vittone on a number of other façade

¹⁷⁴ On Quarini's production of both the drawings in "L'architetto civile" and the corresponding plates in *Istruzioni diverse*, see OLIVERO, *Le opere*, p. 41; CAVALLARI MURAT, "Alcune architetture," p. 4; CARBONERI, "Appunti," pp. 61-67; BRAYDA / COLI / SESIA, "Ingegneri," p. 129; V. MOCCAGATTA, "La vicende costruttive del Palazzo comunale di Riva di Chieri già Radicati di Brozolo (1738-1797) e il primo progetto museum per la raccolta di antichità di Torino (ca.1780-1795)," *Bollettino d'Arte* LXI (July-December 1976), pp. 263-295, here p. 271; and DARDANELLO, "Mario Ludovico Quarini," pp. 218-219, note 128. In this last task Quarini was assisted by Giulio Cesare Bianchi; see WIEBENSON, ed., *Architectural Theory*, no. II-31; and CANAVESIO, "Inediti vittoniani," p. 170.

¹⁷⁵ CARBONERI, "Appunti," p. 62, sees evidence of Quarini's hand in the engraved plate of the Visitazione in *Istruzioni diverse*.

¹⁷⁶ VITTONI, *Istruzioni diverse*, pp. 173-174, pl. 45. See also OLIVERO, *Le opere*, pp. 70, 96-97; IDEM., *La chiesa di S. Francesco*, pp. 8-12; L. COLLINO, *La chiesa di S. Francesco d'Assisi in Torino* (Turin, 1933); PORTOGHESI, *Bernardo Vittone*, pp. 146, 155, 228, pl. 264; MOCCAGATTA, "L'architetto Mario Ludovico Quarini," pp. 5-6, fig. 5; CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 62, no. 165, pl. 156-a; CAVALLARI MURAT, "Aggiornamento," p. 528, note 1, pp. 536-537, fig. 57; TAVASSI LA GRECA, *Bernardo Antonio Vittone*, p. 38; G. DARDANELLO, "Mario Ludovico Quarini," pp. 142, 150-151, note 77 on p. 143; and BERTAGNA, "Disegni e documenti," pp. 189-193.

designs, all characterized by freestanding porticoes, and all erected by Quarini after Vittone's death. They are the façades of San Rocco at Chieri, San Benigno at Fruttuaria (1770-76), and San Bernardino at Chieri (completed 1792), this last façade built according to Quarini's later Neo-Classical design rather than Vittone's original design as illustrated on plate 66 of *Istruzioni diverse*.¹⁷⁷ Both Quarini and Vittone also submitted designs for the campanile of the Comunità di Montanaro.¹⁷⁸

If, as Carboneri asserts, Vittone had lost interest in Guarini's architecture by the mid to late 1750s, then Quarini assuredly had not. In early 1759, just prior to joining Vittone's workshop, Quarini designed the façade of San Filippo at Chieri whose unplastered brickwork, flattened spiral volutes, and serpentine undulation in plan identify it as a Guarinesque work.¹⁷⁹ It is the same brickwork that characterizes the exterior of San Luigi Gonzaga. The construction of San Luigi Gonzaga in 1760 thus coincided in time with Quarini's early experimentation with Guarinian architectural themes.¹⁸⁰

¹⁷⁷ On the façade of San Rocco at Chieri, see CAVALLARI MURAT, *Antologia*, pp. 112, 118; and DARDANELLO, "Mario Ludovico Quarini," p. 160, note 99. On the façade of San Benigno at Fruttuaria, see MOCCAGATTA, "L'architetto Mario Ludovico Quarini," pp. 10-11, fig. 12; IDEM., "Bernardo Antonio Vittone," pp. 91-106, fig. 56; CAVALLARI MURAT, *Lungo la Stura*, pp. 261-264; L. VIOLA, *L'Abbazia di Fruttuaria e il Comune di S. Benigno* (Ivrea, 1981), illustrations on un-numbered pp. 97, 226-227, 231-233, 240; and DARDANELLO, "Mario Ludovico Quarini," pp. 134-135, 153. On the façade of San Bernardino at Chieri, see OLIVERO, *Le opere*, pp. 80-81; BRINCKMANN, *Theatrum Novum*, p. 27, no. 65; CARBONERI, "Prodromi," p. 54; and DARDANELLO, "Mario Ludovico Quarini," p. 160.

¹⁷⁸ MOCCAGATTA, "Bernardo Antonio Vittone," pp. 70-84, figs. 39-40; DARDANELLO, "Mario Ludovico Quarini," p. 222, note 133.

¹⁷⁹ CARBONERI, "Guarini ed il Piemonte," p. 357, notes that Quarini's use of rough brick evokes parallels with Guarini's practice. On the façade of San Filippo at Chieri, see also MOCCAGATTA, "L'architetto Mario Ludovico Quarini," p. 4, fig. 2; and CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 81, no. 235, pl. 187.

¹⁸⁰ The construction of San Luigi Gonzaga also coincided with renovations that Quarini made to the confraternity church of the Misericordia at Saluzzo (1761) and the parish church of San Marcellino at Envie (1760-62), two churches whose unplastered brick façades and scrollwork details reveal a Guarinesque taste. On the attribution of both churches to Quarini, see

Quarini's interest in Guarini's architecture continued to manifest itself until late in his practice, even though his architecture in general is characterized by a Neo-Classicism typical of the late eighteenth century. In 1789, for example, long after his association with Vittone had ended, Quarini erected a Guarinesque, interlaced ribbed vault above the presbytery of San Giacomo at Balangero after an initial design of 1774 (Figure 4.32), its eight interlaced ribs, as discussed above, arranged in the same manner as the eight ribs of Guarini's dome of San Lorenzo.

Perhaps Quarini also designed San Luigi Gonzaga. Indeed, the translation of elements from the project for Santa Chiara at Alessandria to San Luigi Gonzaga is a rather direct and rudimentary one, suggestive of an inexperienced hand at play, one familiar enough with Vittone's early designs but as yet ignorant of the finer points of his working method. The elements are translated unaltered from one church design to the other without any account taken of the nature of the original site conditions, now altered, that gave form to those elements in the first place. For example, San Luigi Gonzaga retains the concave façade of the Santa Chiara project even though it is a rural building with no special requirement to "embrace" the street in the way that the Santa Chiara façade, designed specifically for an urban site, does.¹⁸¹ San Luigi Gonzaga also retains the perforated pendentives of the Santa Chiara project even though it is a freestanding, isolated building with no special need to be illumined in the manner of Santa Chiara, the pendentives of which were originally devised for the specific purpose of filling the church

GABRIELLI, *Arte nell'antico*, pp. 26, 197; and *Guida d'Italia del Touring Club Italiano*, vol. I, *Piemonte* (Milan, 1976, 8th ed.), pp. 334, 355.

¹⁸¹ Another one of Vittone's urban churches, San Michele at Rivarolo Canavese (1758), also features a concave façade that "embraces" the street.

interior with a light that could not be procured from elsewhere. Finally, San Luigi Gonzaga retains the projecting half-columns that flank the interior concave and convex niches of the Santa Chiara project together with the broken inverted tympanae they support. However, where the half-columns of Vittone's original design for Santa Chiara are positioned in precise vertical alignment with the springing points of the interlaced ribs in the dome above, those of San Luigi Gonzaga are not. This is due to the narrowing of the diameter of the San Luigi Gonzaga dome relative to the floor plan, with the result that the interlaced ribs spring from points in plan closer to the center of the dome than they do in the Santa Chiara project.¹⁸² In other words, in spite of the literal translation of the half-column motif from one church design to the other, it no longer forms in San Luigi Gonzaga as it does in the Santa Chiara project, a tight vertical continuity with the ribbed structure of the dome.

The translation of elements from the project for Santa Chiara to San Luigi Gonzaga is thus a rather unsophisticated process at odds with Vittone's flexible and refined working method. For example, in his design for Santa Chiara at Vercelli (*ca.* 1750), which also began as a close copy of the project for

¹⁸² The anomaly is explained by the alternating wide and narrow openings of the perimeter niches in both the project for Santa Chiara at Alessandria and San Luigi Gonzaga. In the project for Santa Chiara, Vittone adroitly adjusted the position of the half-columns that flank the niche openings so that they are evenly spaced with respect to one another. Thus while the niches themselves are alternately wide and narrow, the half-columns that frame them are evenly spaced to form a regular hexagon in plan. By positioning the springing of the ribs of the dome from points directly above the half-columns, Vittone was able to save the regular hexagonal geometry of the dome even as he was also able to save the pronounced triangular geometry of the ground zone. The subtlety of this solution is absent from the design for San Luigi Gonzaga. In San Luigi Gonzaga, the half-columns that flank the niche openings are not adjusted and remain unevenly spaced. However, the ribs of the dome do not spring from points directly above the half-columns as they do in the Santa Chiara project, but from points closer to the center of the dome (the diameter of which has been narrowed by the inward bowing of the arches below), thereby saving the regularity of the star configuration of ribs.

Santa Chiara at Alessandria (Figures 4.57-4.58), Vittone experimented with other designs modeled after San Bernardino at Chieri and the Visitazione at Vallinotto (Figures 4.59-4.60), until, in the end, having returned to the *parti* devised for the Santa Chiara project, he arrived at a completely novel solution (Figures 4.61, 4.64).¹⁸³ In this case, the project for Santa Chiara at Alessandria served as a catalyst for innovation, not as a straightjacket to impede further exploration. In short, the relatively naïve manner in which the various elements of the project for Santa Chiara are translated to San Luigi Gonzaga make it difficult to account for Vittone's authorship of the church, whether it be designed in 1740 or 1760.

On the other hand, it is not difficult to account for Quarini's authorship. After all, Gamarino himself concedes the likelihood that, given the modest size of the church, Vittone did not actually supervise the construction of San Luigi Gonzaga, but delegated the job to an assistant.¹⁸⁴ Might not Vittone have delegated to an assistant the job of designing the church as well? If so, Quarini would have been that assistant. He had joined Vittone's workshop in 1759 where he immediately began to render and incise Vittone's designs, including those for the Visitazione at Vallinotto and Santa Chiara at Alessandria. Familiarity with Vittone's Guarinesque church designs would have only sharpened Quarini's interest in Quarini's architecture, already

¹⁸³ Paris, Musée des Arts Décoratifs, II, nos. 143, 206, 206 verso, 207; VITTORE, *Istruzioni diverse*, pl. 72. On Santa Chiara at Vercelli, see A. PICA, "Vittone in Santa Chiara," *Domus* 456 (November 11, 1967), p. 55; E. GORINI, *Del monastero e della chiesa di Santa Chiara in Vercelli* (Parma, 1968); GIUDICI/MEMOLI, *La architettura*, pp. 303-304; M. CASSETTI, M.T. FRATINI, and P. LAMBERTI, eds., *Aspetti urbanistici della Città di Vercelli nei secoli XVIII e XIX* (Vercelli, 1990).

¹⁸⁴ See GAMARINO, "Architettura barocca," p. 120; and GAMARINO/PANIZZA/FANTINO/GAMARINO, "S. Luigi: Definizione cronologica," in *S. Luigi Gonzaga*, p. 6.

manifest in his Guarinesque façade of San Filippo at Chieri. Once he was charged with the task of designing San Luigi Gonzaga, Quarini would have proceeded to crib Vittone's design for Santa Chiara at Alessandria, but without a thorough mastery of his master's working method. And so he stripped away the multiple shells of the dome and the apsidal screen of columns of the presbytery, the very scenographic elements that exemplify Vittone's earlier project. In short, the design for San Luigi Gonzaga would appear to represent an exercise in the architectural formation of the young Quarini, and not an exercise in the late practice of the elder Vittone. This is not to deny any involvement by Vittone. After all, the design was certainly produced in his studio. Quarini and Vittone had collaborated on the façade of San Francesco d'Assisi in Turin and a number of other projects, and perhaps they collaborated on San Luigi Gonzaga as well — with Quarini in all likelihood having drafted the design and with Vittone having provided his critique.

Vittone identifies four basic church types in *Istruzioni elementari* — the *Chiesa a semplice Nave* (simple nave), the *Chiesa a Tempio* (temple), the *Chiesa a Croce Greca* (Greek cross), and the *Chiesa a Croce Latina* (Latin cross).¹⁸⁵ Two of these types, the *Croce Greca* and the *Tempio*, are centralized in plan, while the other two, the *semplice Nave* and the *Croce Latina*, are longitudinal. Of the two centralized types, the *Croce Greca* is characterized by a cruciform plan with arms of equal length,¹⁸⁶ and the *Tempio* is characterized by a circular, elliptical,

¹⁸⁵ VITTORE, *Istruzioni elementari*, p. 469: "Quattro sono le principali maniere, in cui si formano le Chiese, cioè a semplice Nave, a Tempio, a Croce Greca, ed a Croce Latina." On Vittone's basic church types, see the discussion by CAVALLARI MURAT, "L'architettura sacra," pp. 40-41.

¹⁸⁶ VITTORE, *Istruzioni elementari*, p. 470, pl. 81: "Chiese si nomano a Croce Greca quelle, che rappresentano nel piano loro una Croce di braccia eguali quale è quella, che vedesi nella Tav. 81. La lunghezza, che a queste si assegna tanto per l'uno, che per l'altro verso, è di tre, od al

or polygonal plan (Figure 4.63).¹⁸⁷ It is significant that Vittone restricts the interlaced ribbed dome to the two centralized church types, and these primarily to the *Tempio* type. For example, the five interlaced ribbed vaults designed as part of his *Concorso Clementino* project at the Accademia di San Luca all belong to the *Tempio* type, with Vittone inserting four of the vaults into chapels that are hexagonal in plan (albeit sited within a larger Greek cross church), and the fifth vault into a chapel that is triangular in plan. Likewise, the Visitazione at Vallinotto, the project for Santa Chiara at Alessandria, the first project for Santa Chiara in Turin, and San Luigi Gonzaga at Corterano Monferrato all belong to the *Tempio* type. By contrast, his project for a parish church to be erected “in some very conspicuous place” belongs to the *Croce Greca* type. Only in the cases of Sant’Antonio Abate in Turin and San Germano at San Germano Vercellese did Vittone design an interlaced ribbed vault for a longitudinal church, but both of these were renovations to a pre-existing interior.

There is an especially close connection in Vittone’s work between the interlaced ribbed dome and the triangular-hexagonal plan.¹⁸⁸ Indeed, the majority of Vittone’s designs for interlaced ribbed domes are configured according to a six-pointed star and combined with a triangular-hexagonal

più di quattro larghezze; e vi si comprendono le Cappelle maggiori, il Presbiterio, e se vi si vuole, ancora il Coro.”

¹⁸⁷ IBID., p. 470, pl. 80, fig. 2: “Chiamansi a Tempio le Chiese, che tengono per loro piano principale un circolo, od un’ elisse, ovvero un poligono in esse figure regolatamente inscritibile. La lunghezza del Presbiterio si fa in queste per lo più d’un semidiametro; e lo sfondo delle Cappelle non meno del quarto, nè più del terzo del medesimo diametro. Una Chiesa di tal sorta è quella, che rappresenta la Tavola stessa ora citata al numero 2.”

¹⁸⁸ POMMER, *Eighteenth-Century*, p. 112, notes that the main group of Vittone’s hexagonal churches seem to date to the years around 1740 when his *bizzarria* was still at its peak. On Vittone’s triangular-hexagonal plans, see also WITTKOWER, *Art and Architecture*, p. 425, note 61 on p. 565.

plan. Rarely did he adopt the eight-pointed star, and never did he combine the interlaced rib dome with an octagonal, circular, or oval plan.¹⁸⁹ That Vittone should have preferred the triangular-hexagonal plan for his interlaced ribbed domes seems at first curious since such a plan was so infrequently used in Piedmont and elsewhere in Italy, owing no doubt to the liturgical inconvenience imposed by the peculiar property of the hexagon's geometry. For in such a plan the liturgical axis is the short axis of the church while the transverse axis is the long axis, with the latter terminating not on chapels but on piers. Wittkower, commenting on the hexagonal plan of Sant'Ivo, elucidates the nature of the difficulty:

Before Borromini's S. Ivo, the star-hexagon was almost entirely excluded from Renaissance and post-Renaissance planning. (...) Even the simple hexagon was hardly used. The reason is not difficult to guess. In contrast to the square, the octagon, and dodecagon, where equal sides confront each other in the two main axes, in the hexagon one axis goes through two sides, the other through two angles. It is therefore evident that in plans derived from the hexagon the parts can never conform, and herein lies an element of unrest or even conflict.¹⁹⁰

For this reason relatively few triangular-hexagonally planned churches were erected in Piedmont prior to Vittone's activity there. The few that came to be built are Ascanio Vitozzi's Trinità in Turin (1598-1661; Figure 4.64),¹⁹¹

¹⁸⁹ Vittone designed a number of circular, octagonal, and oval churches but none with interlaced ribbed domes. The one instance in which he did design an octagonal interlaced ribbed dome, as he did in his project for a grand parish church "in some very conspicuous place," he set it atop a *Chiesa a Croce Greca* rather than a *Chiesa a Tempio*.

¹⁹⁰ *IBID.*, pp. 206-208. This same problem is presented by Bernini's design for Sant'Andrea al Quirinale in Rome, a transverse oval with a decagonal arrangement of peripheral chapels, namely that the liturgical axis is the short axis, and the transverse axis is the long axis terminating on piers instead of chapels. Bernini himself recognized the difficulty and sought to emphasize the liturgical axis of Sant'Andrea by means of apsidal screening columns positioned before the main altar.

Sebastiano Guala's Chapel of San Bernardo at Frassinello Monferrato (after 1650; Figure 4.65),¹⁹² and Guarini's Sindone (Figure 4.66) whose plan, while governed by a circular geometry, nevertheless manifests a distinct triangulation in the arrangement of its three entrances, three crossing arches, and three pendentives, together with the hexagonal configuration of its six windows in the drum and its six tiers of arched ribs in the dome, with each tier comprised in turn of six arched ribs (Figure 4.66).¹⁹³ Guarini also designed a hexagonal church for the Padri Somaschi in Messina (*ca.* 1680) which, while not executed and while not intended for a site in Piedmont, was illustrated in his widely disseminated *Architettura civile* (Figure 4.9). In addition, there was the temporary fireworks machine designed on an equilateral triangular plan by Vittone's uncle, Gian Giacomo Plantery, and erected in Turin on the occasion of the elevation of King Vittorio Amedeo II to the throne of Sicily in 1713 (Figure 4.67).¹⁹⁴ Outside of Piedmont, in nearby Lombardy, there is also the hexagonal church of Santa Maria del Quartiere at Parma (1604-19) which Vittone may well have known. And in Rome there is Borromini's hexagonal Sant'Ivo which he assuredly did know (Figure 4.68).¹⁹⁵

¹⁹¹ See ANDEREGG-TILLE, *Schule Guarinis*, pp. 39-41; MARINI, *L'architettura barocca*, pp. 62-63; N. CARBONERI, *Ascanio Vitozzi, Un architetto tra Manierismo e Barocco* (Rome, 1966), pp. 143-148, fig. 185; IDEM., "Il barocco piemontese," p. 282, fig. 1 (lower left corner); IDEM., "Architettura," in *Mostra del Barocco*, I, p. 24, no. 3; CAVALLARI MURAT, "L'architettura sacra," p. 37, note 6, fig. 2; TAMBURINI, *Le chiese*, pp. 92-99; and GIUDICI/MEMOLI, *La architettura*, p. 279.

¹⁹² See PROLA, "I rapporti," pp. 406-414, figs. 1, 6-14; and PROLA/PEYROT, *Architetture Barocche*, un-numbered page (listing under Frassinello Monferrato), and p. 31, no. 7 on p. 33.

¹⁹³ The hexagonal arrangement of elements is further iterated by the sunken hexagonal panels, six in number, positioned directly above the aedicule of the drum.

¹⁹⁴ See CAVALLARI MURAT, "Gian Giacomo Plantery," pp. 314, 345, fig. 57 on p. 345; and KESSEL, *Festarchitektur*, pp. 211-214, no. 67, figs. 66-67.

¹⁹⁵ In addition, there are several sixteenth-century projects that anticipate Sant'Ivo but which were never built, namely Baldassare Peruzzi's sketch of a triangular building (Florence, Uffizi,

Vittone thus had very few examples to draw upon, and yet he designed numerous hexagonally planned churches and church projects both with and without interlaced ribbed vaults:¹⁹⁶ — the Visitazione at Vallinotto (1738-39; Figures 4.39-4.40), a project for Santa Chiara at Alessandria (Figures 4.48-4.49), the first project for Santa Chiara in Turin (1742; Figures 4.50-4.51), Santa Chiara at Vercelli (*ca.* 1750; Figures 4.57-4.62), Santa Maria dell'Assunta at Grignasco (1750-83; Figure 2.15), an unexecuted project for Santa Maria Maddalena at Mondovì (1749; Figure 4.71),¹⁹⁷ an unexecuted project for the Chierici Regolari Ministri degli Infermi in Turin (*ca.* 1750; Figure 4.70),¹⁹⁸ San Michele at Borgo d'Ale (1770-80; Figure 4.69),¹⁹⁹ and an undated, unexecuted

no. 553A) and Giulio da Sangallo's designs for various triangular and hexagonal castles (Siena, Biblioteca Comunale, MS. S. IV, 8, fol. 4); see S.S. MUNSHOWER, "Filippo Juvarra, Carlo Stefano Fontana, and the Concorso Clementino of 1705," M.A. Thesis, The Pennsylvania State University, University Park, Pennsylvania, 1978, p. 24, notes 47 and 50 on p. 37, figs. 14, 16; and IDEM., ed., *Architectural Fantasy*, p. 31. Vittone could hardly have known any of these sketches, however, nor could he have known Giuseppe Mariani's hexagonal church of Santi Cosma e Damiano at Alcamo in Sicily (1721), which was copied directly after Sant'Ivo. On Mariani's church, see MATTEUCCI, *L'architettura del Settecento*, pp. 176-177; and CURCIO/KIEVEN, eds., *Storia dell'architettura*, I, p. 316.

¹⁹⁶ Vittone's partiality for the hexagonal plan, and the important place it occupies in his architecture, is summarized by BRICARELLI, "Bernardo Antonio Vittone," p. 234: "La forma esagona era amata del nostro architetto, e gli fornì il pensiero fondamentale di alcune altre tra le sue più felici invenzioni."

¹⁹⁷ PORTOGHESI, *Bernardo Vittone*, p. 232, pls. 167-168; CARBONERI, "Architettura," in *Mostra del Barocco*, I, pp. 59-60, no. 151, fig. 85; CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 27, no. 51; figs. 84-85; DARDANELLO, ed., *Sperimentare*, p. 289.

¹⁹⁸ VITTONI, *Istruzioni diverse*, pls. 54-56. PORTOGHESI, *Bernardo Vittone*, pp. 119, 223, dates the project to about 1750 while WITTKOWER, "Vittone's Drawings," p. 171, note 66, dates it to the late 1730s. See also CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 28, no. 56, figs. 89-91.

¹⁹⁹ OLIVERO, *Le opere*, pp. 99-101, pl. XXXVIII (top figure); BRICARELLI, "Bernardo Antonio Vittone," p. 234; BRINCKMANN, *Theatrum Novum*, p. 20, no. 26, pl. 26-B; RODOLFO, "Notizie inedite," pp. 453; CAVALLARI MURAT, "L'architettura sacra," p. 39, fig. 12; ANDEREGG-TILLE, *Schule Guarinis*, pp. 59-60; CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 63, no. 173; PORTOGHESI, *Bernardo Vittone*, pp. 156-158, pls. 294-299; CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 40, no. 110, figs. 165-168; WITTKOWER, *Art and Architecture*, p. 425, note 61 on p. 565; TAVASSI LA GRECA, *Bernardo Antonio Vittone*, p. 39; BENEDETTO/BENEDETTO, *La luce ha mani*, pp. 98-203.

ideal Temple, i.e., the so-called *Chiesa a Tempio* itself (Figure 4.63).²⁰⁰ Vittone also designed San Gaetano at Nice (1744-49), a church with an oval plan, but one whose six piers and six niches surrounding the central space impart a distinct hexagonal geometry to the church (Figure 4.72).²⁰¹ In addition, he is credited with having designed San Luigi Gonzaga at Corterano Monferrato (1760; Figure 4.54), a church that, as argued above, may have been more precisely the work of Vittone's assistant, Mario Ludovico Quarini. Finally, Vittone designed a number of unidentified, unexecuted triangular-hexagonal church projects conserved today in the Musée des Arts Décoratifs in Paris (Figure 4.90). Vittone's predilection for the triangular-hexagonal plan is also seen in the hexagonal staircase of his project for a grand palace,²⁰² and in the

²⁰⁰ VITTORE, *Istruzioni elementari*, pl. 80, fig. 2. See also PORTOGHESI, *Bernardo Vittone*, p. 155, fig. LXI; and CAVALLARI MURAT, "Aggiornamento tecnico," fig. 5 (bottom).

²⁰¹ VITTORE, *Istruzioni diverse*, pl. 48. Vittone inherited the commission from Guarini who had designed a pentagonal project. On Vittone's oval-hexagonal version, see BRINCKMANN, *Theatrum Novum*, pl. 98-B; CAVALLARI MURAT, "L'architettura sacra," p. 45, fig. 24; PORTOGHESI, *Bernardo Vittone*, pp. 116, 147, fig. XXIV; CAVALLARI MURAT, "Aggiornamento," p. 539, figs. 60, 61-b; FAGIOLO, "L'universo," fig. 18; TAVASSI LA GRECA, "Considerazioni," p. 252, note 15; and FOUSSARD/BARBIER, *Baroque: Niçois*, pp. 170-177. The combination of an oval and hexagon is a solution that had been anticipated by the churches of San Giacomo Maggiore at Campertogno (1723) and Saint-Pons at Nice (1725-43, consecrated 1731). Indeed, Saint-Pons is located in the same city as San Gaetano, and was nearing completion at the very time when Vittone began drafting the design for his church. It has been attributed to Juvarra and dated to the mid-1720s, shortly before the young Vittone would have joined Juvarra's workshop. It is thus possible, even likely, that Vittone would have been familiar with its design and had it firmly in mind when he began sketching his own design for San Gaetano; see J.-M. SANCHEZ, "L'abbaye de Saint-Pons à Nice: une oeuvre de Filippo Juvarra influencée par Pierre Puget?" *Provence historique* LIII:213 (August-September 2003), pp. 377-384. On Saint-Pons at Nice, see also FOUSSARD/BARBIER, *Baroque: Niçois*, pp. 159-170, figs. 118-119. On San Giacomo Maggiore at Campertogno, see L. BENEVOLO, "La chiesa parrocchiale di Campertogno," *Palladio* n.s. I (1951), pp. 165-173; IDEM., "Le chiese barocche Valsesiane: Cap. 5. – La chiesa parrocchiale di Campertogno," *Quaderni dell'Istituto di Storia dell'Architettura* 22-24 (1957), pp. 1-68, here pp. 27-34; and ANDEREGG-TILLE, *Schule Guarinis*, pp. 28-30.

²⁰² VITTORE, *Istruzioni diverse*, pl. 16. See also PORTOGHESI, *Bernardo Vittone*, p. 159, fig. LXIII.

hexagonal pavilion centered in the portico of one of his two projects for the façade of Milan Cathedral.²⁰³

There are yet other hexagonal churches in Piedmont — Santa Maria Vergina dell'Assunta at Bubbio (1750-79),²⁰⁴ Sant'Antonio at Occhieppo Superiore (1768-74; Figure 4.31),²⁰⁵ the parish church at Rimella (1770-86),²⁰⁶ San Michele in Turin (1784),²⁰⁷ and San Nicolò at Mombaldone (1790)²⁰⁸ — but they all date to the second half of the eighteenth century, subsequent to Vittone's intervention and perhaps inspired as a direct response to it, too late in any case to have informed Vittone's own designs.²⁰⁹ There is also Costanzo Michela's unexecuted hexagonal project for San Salvatore at Borgomasino (1748-49), but it too appears to have been largely inspired by Vittone's church designs, most notably the Visitazione at Vallinotto.²¹⁰

²⁰³ VITTONI, *Istruzioni diverse*, pl. 46. See also PORTOGHESI, *Bernardo Vittone*, p. 142, fig. LII; and N. CARBONERI, "Il dibattito sul gotico," in Viale, ed., *Bernardo Vittone e la disputa*, I, p. 146, fig. 16.

²⁰⁴ PROLA / PEYROT, *Architetture Barocche*, p. 31, no. 7 on p. 33, and un-numbered page (listing under Bubbio).

²⁰⁵ IBID., p. 31, no. 7 on p. 33, and un-numbered page (listing under Occhieppo Superiore).

²⁰⁶ L. BENEVOLO, "L'architettura della Valsesia superiore durante l'età Barocca," *Palladio* n.s. III:4 (October-December 1953), pp. 165-174, here p. 170, pl. 3.

²⁰⁷ A. LANGE, "La Chiesa di San Michele dei Trinitari Scalzi e i disegni di Pietro Bonvicini," *Bollettino Storico-Bibliografico Subalpino* XLIII:4 (1941), pp. 299-307; ANDEREGG-TILLE, *Schule Guarinis*, pp. 36-37; MARINI, *L'architettura barocca*, p. 171.

²⁰⁸ PROLA / PEYROT, *Architetture Barocche*, p. 31, no. 7 on p. 33, and un-numbered page (listing under Mombaldone).

²⁰⁹ For example, Bonvicini, who had apprenticed in Vittone's studio, closely modeled his design for San Michele in Turin after Vittone's hexagonal church of San Michele at Borgo d'Ale (1770-80), not only in plan but also in its many architectural details.

²¹⁰ Michela designed two projects for San Salvatore at Borgomasino, one a hexagonal project to have been erected on a site in town and the other an octagonal project to have been erected on a hilltop site; see POMMER, "Costanzo Michela," p. 170, figs. 2-3. Neither project was executed, and Vittone himself inherited the commission for which he designed and erected not a hexagonal church, but an octagonal one similar to Michela's octagonal project; see E.

If hexagonally planned churches rarely occurred in built form in Piedmont prior to Vittone's intervention there, they occurred more frequently as theoretical projects published in architectural treatises. Besides Guarini's hexagonal project for the Padri Somaschi in Messina published in *Architettura civile* (Figure 4.9), discussed above, there is Sebastiano Serlio's project for a hexagonal temple in the Fifth Book (on Temples) of his *Tutte l'opere d'architettura et prospettiva* (Figure 4.73),²¹¹ and his reconstruction of an ancient hexagonal temple in the Third Book (on Antiquities) of the same treatise.²¹² There are also Giovanni Battista Montano's many reconstructions of ancient triangular and hexagonal temples published in *Li cinque libri di architettura* (Figure 4.74),²¹³ and Andrea Pozzo's project for a triangular-hexagonal church and college in *Perspectiva pictorum* (Figure 4.75).²¹⁴ Vittone owned copies of all four treatises and would have been familiar with the triangular-hexagonal projects illustrated in them. In addition, there is Jacques Androuet du Cerceau's project for a triangular-hexagonal country villa with three projecting wings illustrated in *Livre d'architecture*.²¹⁵ And while Vittone did

OLIVERO, "Borgomasino, chiesa parrocchiale," *Palladio* VI (1942), pp. 121-122; BENEDETTO/BENEDETTO, *La luce ha mani*, pp. 72-77. Michela also designed Santa Marta at Agliè (1739), a longitudinal church, but one with an entrance bay and a presbytery bay each articulated in plan with its own distinct triangular-hexagonal geometry.

²¹¹ SERLIO, *Tutte l'opere*, V, fol. 6-r.

²¹² IBID., III, iv, fol. 14-r. See also WITTKOWER, *Art and Architecture*, p. 206, note 11 on p. 529.

²¹³ MONTANO, *Li cinque libri*, II, pls. 4, 27, 40, 41, III, pls. 11, 12, 17, 21, 24, 43. See also ZANDER, "Le invenzioni," (1958), figs. 5, 6, 34, 35, 40; (1962), figs. 49, 66, 67, 68, 113; MUNSHOWER, "Filippo Juvarra, Carlo Stefano Fontana," p. 25, note 55 on p. 39, fig. 20; and IDEM., ed., *Architectural Fantasy*, p. 31.

²¹⁴ POZZO, *Perspectiva pictorum*, II, fig. 110. See MUNSHOWER, "Filippo Juvarra, Carlo Stefano Fontana," p. 25, note 19 on p. 39, fig. 19; IDEM., ed., *Architectural Fantasy*, pp. 31, 74, fig. III-c; and H. HAGER, *Filippo Juvarra e il concorso di modelli del 1715 bandito da Clemente XI per la nuova sacrestia di S. Pietro*, Translated by C. Picchio (Rome, 1970), p. 30, note 133 on p. 56.

not own a copy of du Cerceau's treatise, there was one available to him for study at the Accademia di San Luca (which since 1666 had enjoyed a close association with the French Academy).²¹⁶

Vittone was also closely familiar with Carlo Fontana's unexecuted, triangular-hexagonal project for a Villa in the Veneto (1689), having made several copies of it in Cardinal Albani's library while a student at the Accademia di San Luca. Fontana's project is devised in two versions or stages, each stage with a central *salone* surrounded on the periphery by three projecting rectilinear apartment blocks alternating with three recessed vestibules (Figures 4.76-4.77).²¹⁷ The first stage features a hexagonal *salone*, the second a circular one. Both stages are characterized by an undulation of rectilinear and concave perimeter walls, implicit in the first stage, explicit in the second. Fontana's project was highly influential, having inspired the production, well into the eighteenth century, of numerous comparable projects by his students and followers at the Accademia di San Luca.²¹⁸ For

²¹⁵ J.A. DU CERCEAU, *Livre d'architecture de Jacques Androuet du Cerceau* (Paris, 1559), pl. 28. See MUNSHOWER, "Filippo Juvarra, Carlo Stefano Fontana," p. 25, note 53 on pp. 38-39, fig. 18; and IDEM., ed., *Architectural Fantasy*, p. 31, fig. III-b.

²¹⁶ Decades earlier, while a student at the Accademia di San Luca preparing for his *Concorso Clementino* design of 1705, Juvarra appears to have familiarized himself with du Cerceau's same country house project; see IDEM., "Filippo Juvarra, Carlo Stefano Fontana," p. 25, note 53 on pp. 38-39. There is also John Thorpe's Longford Castle in Wiltshire, England (1591) erected on a purely triangular plan and illustrated in Colen Campbell's *Vitruvius Britannicus*, 5 vols. (London, 1767-1771; facs. ed., New York, 1967), V, p. 10, pls. 94-98; see MUNSHOWER, "Filippo Juvarra, Carlo Stefano Fontana," p. 22, note 40 on p. 36, figs. 8-9. Still, while Vittone owned a copy Campbell's treatise (PORTOGHESI, *Bernardo Vittone*, p. 250, no. 630), Thorpe's triangular project does not appear in the original 1715-1725 edition, in which only the first three volumes were issued, but in the 1767-1771 edition, in which volumes 4 and 5 were issued for the first time by John Woolfe and James Gandon, a year after Vittone death and at any rate much too late to have had any impact on Vittone's triangular designs.

²¹⁷ Windsor Castle, Royal Library, nos. 9706-9712. On Fontana's drawings for a Villa in the Veneto, see also BRAHAM/HAGER, *Carlo Fontana*, pp. 107-109, nos. 294-301, figs. 232-237; HAGER, "Riflessi palladiani," pp. 59-60, fig. IV, MUNSHOWER, ed., *Architectural Fantasy*, fig. III-d; and IDEM., "City Informs Garden: Filippo Juvarra as Landscape Designer," in Hager and Munshower, eds., *Projects and Monuments*, figs. 3-e, 3-g.

example, sometime around 1694, just five years after Fontana had drawn up his design, Fischer von Erlach designed a number of small garden pavilions with triangular-hexagonal plans inspired directly by Fontana's project, complete with three projecting apartments alternating along the perimeter with three recessed vestibules, but with a staircase occupying the central core instead of a *salone* (Figure 4.78).²¹⁹

In 1705, on the occasion of the First Class architectural competition of the *Concorso Clementino* at the Accademia di San Luca, both Filippo Juvarra and Carlo Stefano Fontana, Carlo Fontana's nephew, submitted triangular-hexagonal projects heavily indebted to Fontana's Villa in the Veneto project, with Juvarra's project (Figure 4.79) more closely resembling the first stage of Carlo Fontana's project, and Carlo Stefano Fontana's project (Figure 4.80) more closely resembling the second stage. Both Juvarra and Carlo Stefano Fontana adapted the same triangular-hexagonal *parti* to other designs as well. Juvarra, for example, adapted it to a schematic design for a palace (Figure 4.85),²²⁰ while Carlo Stefano Fontana adapted it to his project for a Triangular Temple that he submitted as his *dono accademico* in 1722 (Figure 4.81). Still other academicians, including Giovanni Giacomo Pelliccia, Antonio Valeri, Francesco Collecini, and Gabriel-Pierre-Martin Dumont, also designed triangular-hexagonal projects over the course of the eighteenth century that

²¹⁸ IDEM., "Filippo Juvarra, Carlo Stefano Fontana," pp. 59-92; IDEM., ed., *Architectural Fantasy*, pp. 30-42; IDEM., "City Informs Garden," pp. 46-67; BRAHAM/HAGER, *Carlo Fontana*, p. 108.

²¹⁹ Vienna, Albertina, Codex M, fol. 6-8. See H. SEDLMAYER, *Johann Bernhard Fischer von Erlach* (Vienna, 1956), pp. 249-250, pls. 64-66; and MUNSHOWER, "Filippo Juvarra, Carlo Stefano Fontana," p. 26, notes 56-57 on p. 39, figs. 21-23.

²²⁰ Turin, Biblioteca Nazionale. See ROVERE/VIALE/BRINCKMANN, *Filippo Juvarra*, pl. 165; and MUNSHOWER, "Filippo Juvarra, Carlo Stefano Fontana," fig. 61.

were dependent in varying degrees on Carlo Fontana's Villa in the Veneto project (Figures 4.86-4.89).²²¹

It is within the context of this academic production that Vittone's own designs for triangular-hexagonal churches, whether they be capped by interlaced ribbed domes or not, are to be understood. While a student at the Accademia di San Luca in Rome Vittone had assiduously studied and made several copies of Fontana's Villa in the Veneto project. Fontana had devised his project in two stages, but Vittone's copies are of the first stage only (Figure 4.82).²²² It was from these copies, today conserved in the Musée des Arts Décoratifs in Paris, that Vittone later drew up his own design for a country house that he describes and illustrates in *Istruzioni diverse* (Figure 4.83).²²³ Vittone boasts that his country house design is notable for the novelty of its idea, the regularity and beauty of its form, and the convenience with which it is able to host a family of singular distinction.²²⁴ He tells us that it is

²²¹ Giovanni del Frago's Villa Lardereria at Bagheria in Sicily (begun 1749) was also designed on a triangular-hexagonal plan very similar to that of Fontana's Villa in the Veneto project; see CURCIO/KIEVEN, eds., *Storia dell'architettura*, I, pp. 318-319.

²²² One of Vittone copies depicts, from the top of the sheet to the bottom, an elevation and two plans after Fontana's design (Paris, Musée des Arts Décoratifs, II, no. 174; Windsor Castle, Royal Library, nos. 9708, 9710, 9712). Another one of Vittone's copies depicts one of the same plans after Fontana's design (Paris, Musée des Arts Décoratifs, I, no. 68/9; Windsor Castle, Royal Library, no. 9710). See BRAHAM/HAGER, *Carlo Fontana*, pp. 108-109, nos. 295-296, 298, fig. 235; CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 35, no. 88; POMMER, *Eighteenth-Century*, p. 108, note 15 on p. 122; and WITTKOWER, "Vittone's Drawings," p. 170, note 61.

²²³ VITTONI, *Istruzioni diverse*, p. 162, pl. 32. Vittone's country house project, with the exception of minor details, is identical to the first stage of Fontana's Villa in the Veneto project. Both feature a central hexagonal *salone* with six doors, each door centered on one of the six walls, three of the doors leading to apartment blocks and three to vestibules. See OLIVERO, *Le opere*, p. 69; PORTOGHESI, *Bernardo Vittone*, pp. 167-168, 234-235, fig. LXXVIII; CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 35, no. 88; POMMER, *Eighteenth-Century*, p. 108, note 15 on p. 122; and WITTKOWER, "Vittone's Drawings," p. 170, note 61.

²²⁴ VITTONI, *Istruzioni diverse*, p. 162: "Dimostra la Tav. 32. il Disegno d'una Casa di Campagna. Si è questa qui rapportata per la novità dell' idea parsa a me non dispregevole, attesa la regolarità, e la vaghezza, ch' ella ha nella sua forma; e per i comodi, che vi sono; per

composed of three floors, with each floor having three independent apartment blocks.²²⁵ On the ground floor one passes through one of three vestibules to the central *salone*.²²⁶ Above, on the first floor, one passes to the apartments by way of a large room, located directly above the hall, while on the second floor the apartments are connected to each other by means of galleries.²²⁷ Vittone boasts of the design's novelty, without giving any credit to Fontana as the design's author.²²⁸ Vittone was so enamored with Fontana's idea that he seems to have co-opted it as his own invention, returning to it on numerous occasions throughout the course of his practice to generate designs for domestic as well as ecclesiastical buildings.

It was at the Accademia di San Luca that Vittone familiarized himself with yet another triangular-hexagonal project, namely Giuseppe Ercolani's student project for an Academy of Fine Arts and Church submitted to the Accademia in 1708 in connection with the First Class competition in architecture of the *Concorso Clementino* held that year (Figure 4.37).²²⁹ It is

cui atta rendersi a servire di ricetto, e di trattenimento ad una Famiglia anche di singular distinzione."

²²⁵ IBID., p. 162: "Ella è, come vedesi, a trè Piani, compresovi quello di terra; ed a trè Appartamenti per cadaun piano, l'uno dall' altro indipendenti."

²²⁶ IBID., p. 162: "Al Piano di terra vi si ha l'accesso dall' Atrio, che vi resta nel mezzo, e da' Vestiboli, che lo precedono."

²²⁷ IBID., p. 162: "Superiormente si passa a' detti Appartamenti per via d'una gran Sala, la quale esiste sopra il detto Atrio, cioè al primo Piano per mezzo della Sala medesima, con cui comune hanno il Piano loro le Camere componenti li detti Appartamenti; ed al Piano superiore per mezzo di Logge, che internamente vi stanno tutto all' intorno disposte."

²²⁸ This is not the only instance of Vittone having neglected to give Fontana his due credit. He publishes Fontana's catafalque for King Pedro II in *Istruzioni diverse*, pp. 200-201, pl. 103 (right figure) again without any mention of Fontana.

²²⁹ Rome, Accademia di San Luca, Archivio Storico, cart. Y, n. 316. The theme of the First Class competition in architecture of the *Concorso Clementino* of 1708 was a Palace for an Academy of Fine Arts with a centrally planned church. Ercolani did not officially submit his project to the Accademia as part of the competition, but separately on the occasion of his

certain that Vittone knew of Ercolani's project since he took its interlaced ribbed vault as the point of departure for his own designs for interlaced ribbed vaults in his *Concorso Clementino* project of 1732 (Figures 4.35-4.36).²³⁰

Ercolani's project is an equilateral triangle in plan, divided into two stories, a *primo piano* and a *secondo piano*. The perimeter sides of both stories are given over to rectangular chambers for studios, classrooms, and stairwells, and the corners are given over to circular chambers for more studios and exhibition halls. The triangular core, separated from the perimeter rooms by corridors, is reserved for the church that rises the full interior height of the building extending into a third storey not illustrated on the sheet but described by Ercolani in the index. The lower level of Ercolani's church is a rotunda circumscribed by three walls that form an equilateral triangle in plan. An entrance bisects each of the three walls, and each of its three corners is given over to a concave niche reserved for a chapel. The hexagonal geometry implicit in the plan of the lower floor is made explicit in the upper floor. There the walls form a distinct hexagon capped by an interlaced ribbed dome whose six ribs trace out a Star of David in plan. Upon the dome rests a hexagonal lantern rotated with respect to the dome in a Guarinesque fashion.

acceptance as a member there. On the First Class competition of the *Concorso Clementino* of 1708 and Ercolani's related project, see MARCONI/CIPRIANI/VALERIANI, *I disegni*, I, p. 9, nos. 189-203, figs. 189-203, II, p. 8, nos. 2139-2140, figs. 2139-2140; MUNSHOWER, "Filippo Juvarra, Carlo Stefano Fontana," pp. 76-77, fig. 72; IDEM., ed., *Architectural Fantasy*, pp. 64-75; C. CHALLINGSWORTH, "The 1708 and 1709 Concorsi Clementini at the Accademia di S. Luca in Rome and the Establishment of the Academy of Arts and Sciences as an Autonomous Building Type," Ph.D. dissertation, The Pennsylvania State University, University Park, Pennsylvania, 1990; and IDEM., "The Academy of Arts and Sciences: A Paper Building Type of the Eighteenth Century," in Millon and Munshower, eds., *An Architectural Progress*, pp. 720-763, here p. 724.

²³⁰ Vittone's debt to Ercolani's student project was first identified by OECHSLIN, "Vittone e l'architettura," p. 33, note 4, fig. 5-a. See also PORTOGHESI, *Roma Barocca*, p. 440, fig. 390, who mistakenly identifies Ercolani's student project as a design by Giuseppe Ghezzi, the secretary who accepted and recorded Ercolani's project on behalf of the Accademia di San Luca.

The design is treated as a purely abstract exercise since there is no consideration at all given to a liturgical axis or to liturgical requirements. There is no main chapel and no main entrance. Instead, the chapels are all equal to one another in size and shape, as are the entrances, with no distinctive features to distinguish one from another.

In drafting his design, Ercolani was able to draw upon several prototypes, namely Alessandro Pieroni's design for a triangular church,²³¹ Francesco Contini's triangular casino for the Barberini family at Palestrina (ca. 1650),²³² one of Giovanni Battista Montano's reconstructions of an ancient triangular temple,²³³ and, most striking of all, Andrea Pozzo's project for a triangular College and Church (Figure 4.74).²³⁴ Contini was the father of Giovanni Battista Contini who taught at the Accademia di San Luca and who was one of the judges of the *Concorso Clementino* competition of 1708, the very competition to which Ercolani's project was associated, and so Ercolani would have had every incentive to take an especially close look at the elder Contini's casino design.²³⁵

²³¹ Florence, Uffizi, no. 4499A. See MUNSHOWER, "Filippo Juvarra, Carlo Stefano Fontana," p. 24, note 48 p. 37, fig. 15; and IDEM., ed., *Architectural Fantasy*, p. 31.

²³² See HAGER, *Filippo Juvarra e il concorso*, p. 30, note 133 on p. 56; MUNSHOWER, "Filippo Juvarra, Carlo Stefano Fontana," pp. 22-23, notes 43-44 on pp. 36-37, fig. 11; and IDEM., ed., *Architectural Fantasy*, p. 31. See also BENEDETTI, "Guarini ed il barocco romano," p. 729, figs. 20-21.

²³³ MONTANO, *Li cinque libri*, II, pl. 27. See ZANDER, "Le invenzioni," (1962), fig. 68; HAGER, *Filippo Juvarra e il concorso*, p. 30, note 134 on p. 56; and MUNSHOWER, "Filippo Juvarra, Carlo Stefano Fontana," p. 79, note 134 on p. 94, fig. 75.

²³⁴ POZZO, *Perspectiva pictorum*, II, fig. 110. See HAGER, *Filippo Juvarra e il concorso*, p. 30, note 133 on p. 56; and MUNSHOWER, ed., *Architectural Fantasy*, pp. 31, 74, fig. III-c.

²³⁵ Ercolani also seems to have known Fischer von Erlach's projects for a small garden pavilion (ca. 1694); see IDEM., "Filippo Juvarra, Carlo Stefano Fontana," fig. 23.

Ercolani also would have had every incentive to study Pozzo's project which proceeded from an identical programme, and which both in form and function so closely anticipates his own project. Pozzo's project is an equilateral triangle in plan with classrooms at the perimeter and church at the center. The church is embedded within the college, with the three concave chapels that occupy the corners rising in height the entire three stories, and the hexagonal drum and dome rising above the roof. There is no indication of a main altar in Pozzo's project — all three chapels are equal in size and shape, none of them distinguished from the others in any way. The two entrances are also equal in size and shape. In all these features Pozzo's design closely anticipates Ercolani's design, the only significant difference between the two designs being the interlaced ribbed vault which is present in Ercolani's design but absent in Pozzo's design, and the number of entrances which amount to three in Ercolani's design, but only two in Pozzo's design.

The triangular-hexagonal geometry that Vittone and other academicians applied to their designs may have embodied a symbolic value associated with the Accademia di San Luca itself. In 1705 the Accademia had adopted a secular emblem to replace the image of St. Luke which had served as its standard since its founding in 1577.²³⁶ The new emblem depicts the principal instruments of the three visual arts — a paintbrush, a chisel, and a compass — arranged in the form of an equilateral triangle (Figure 4.84), a figure whose geometrical properties are particularly apt to symbolize the unity and equal nobility of the visual arts which the Accademia sought to

²³⁶ On the debate at the Accademia concerning the adoption of the new emblem, see MISSIRINI, *Memorie per scrivere*, pp. 170-171; *La Reale Insigne Accademia*, p. 109; and M. MERCALLI, "L'architetto si presenti. Nota iconografiche su alcuni ritratti del secolo XVIII," in Contardi and Curcio, eds., *In Urbe Architectus*, pp. 229-238, here p. 229, note 4 on p. 233.

promote. This symbolism is made explicit by the motto that accompanies the emblem, *Aequa Potestas*, taken from Horace's *Ars poetica*, referring to the equal power of the visual arts.

Students and professors of the Accademia made allusions to the new emblem in their projects from the very beginning of the emblem's adoption. For example, in 1705, the year that the new emblem was introduced, the topic chosen for the First Class architectural competition of the *Concorso Clementino* was a "Royal Palace in a Villa for the Pleasure of Three Important Personages," a programme that, in its specification that the palace be equally divided into three distinct apartments, was purposely devised to elicit a triangular form. It was a programme that also, in its reference to the equal power and grandeur of the three visual arts, was meant to call to mind the newly adopted academic emblem.²³⁷ Susan Scott Munshower writes:

It is tempting to think of the "Three Important Personages" in an allegorical sense, and to hypothesize that the tri-part accommodations were meant for the honorary heads of the three arts — painting, sculpture and architecture — who were to reside in perfect harmony under one roof...²³⁸

First prize in the competition was won by Filippo Juvarra (Figure 4.79), who just the year before had arrived in Rome and joined Carlo Fontana's studio.²³⁹ Second prize went to Fontana's nephew, Carlo Stefano Fontana

²³⁷ MUNSHOWER, *Architectural Fantasy*, pp. 30, 33-34; IDEM., "City Informs Garden," p. 47.

²³⁸ IBID., p. 47.

²³⁹ On Juvarra's academic project, see BRINCKMANN, *Theatrum Novum*, pp. 54-55, nos. 134-137, pls. 134-137; MARCONI/CIPRIANI/VALERIANI, *I disegni*, I, p. 7, nos. 140-142, figs. 140-142; MUNSHOWER, ed., *Architectural Fantasy*, pp. 30-31; CIPRIANI, ed., *Æqua Potestas*, pp. 128-130, nos. IV.7 – IV.8; and PINTO, "Architecture and Urbanism," pp. 130-131.

(Figure 4.80).²⁴⁰ Both Juvarra and Carlo Stefano Fontana submitted triangular-hexagonal projects that, while they owe much to the precedent of Carlo Fontana's project for a Villa in the Veneto,²⁴¹ also allude to the triangular emblem of the Accademia.²⁴² In the case of Juvarra's project, the allusion is made explicit by the graphic representation of the emblem on two of his sheets.²⁴³ And a separate sheet, unrelated to his academic project, but perhaps rendered about the time that he drew it up, Juvarra made a detailed drawing of the emblem itself with the inscription of the motto entwined around the three instruments that make up the triangle (Figure 4.84).²⁴⁴ In addition, Juvarra produced a schematic design for a palace that, in its emphatic triangular geometry, plainly alludes to the academic emblem (Figure 4.85).²⁴⁵

²⁴⁰ On Fontana's project, see MARCONI/CIPRIANI/VALERIANI, *I disegni*, I, p. 7, nos. 143-145, figs. 143-145; MUNSHOWER, "Filippo Juvarra, Carlo Stefano Fontana," pp. 46-58, figs. 6-7; and IDEM., ed., *Architectural Fantasy*, pp. 30-42, figs. III-19, III-20.

²⁴¹ Juvarra and Carlo Stefano Fontana's projects both feature three entrance vestibules and three rectangular apartments alternating around a central open courtyard. Juvarra's project, with its hexagonal courtyard, was derived from the first stage of Carlo Fontana's Villa in the Veneto project while Carlo Stefano Fontana's project, with its circular courtyard, was derived from the second stage. In both projects, an open courtyard is substituted for the enclosed *salone* of Carlo Fontana's original project. See IDEM., "Filippo Juvarra, Carlo Stefano Fontana," pp. 26-27; IDEM., ed., *Architectural Fantasy*, pp. 31-33; and IDEM., "City Informs Garden," p. 48.

²⁴² IDEM., ed., *Architectural Fantasy*, pp. 33-34.

²⁴³ The emblem appears twice, once in the form of two superimposed triangles atop the index at the lower right corner of the sheet illustrating the overall plan, and once again in the form of a single triangle atop the index at the lower center of another sheet illustrating plans, elevations and sections; see IDEM., ed., *Architectural Fantasy*, pp. 37, 39, figs. III-16, III-18.

²⁴⁴ Professor Susan C. Scott of McDaniel College informs me that there was no official version of the academic emblem, the only obligatory ingredients being the motto, *Aequa Potestas*, and the triangle formed by the brush, compass, and chisel. Sometimes the motto was unfurled above the triangle, other times it was entwined around and within it. Usually the triangle was depicted as an equilateral triangle, though much less frequently it was depicted as an isosceles triangle.

²⁴⁵ On Juvarra and the academic emblem, see now I. SALVAGNI, "Architettura ed «Aequa potestas». Filippo Juvarra, l'Accademia di San Luca e gli architetti," in Ruggero, ed., *La forma del pensiero: Filippo Juvarra*, pp. 33-53, a source that has arrived too late for me to fully consult.

Ercolani's academic project of 1708 for an Academy of Fine Arts and Church, an equilateral triangle in plan, also alludes to the triangular emblem of the Accademia di San Luca (Figure 4.37).²⁴⁶ As if to underscore that allusion, Ercolani illustrates the emblem itself on the sheet. It appears at the center of the composition, immediately above the dedication, emblazoned on the oval shield propped up by the helmeted figure seated to the left of the papal coat of arms. Ercolani's project, like the academic emblem, promotes and celebrates the equal power and unity of the visual arts. Indeed, the triangular church makes no accommodation for the liturgical axis, its three chapels all being equal in shape and size, and its three entrances also being equal in size and shape, an arrangement that suggests not so much a church as a secular shrine.

Another project for a triangular temple, this one designed by Carlo Stefano Fontana and submitted to the Accademia di San Luca in 1722 as his *dono accademico* (Figure 4.81), alludes to the triangular emblem of the Accademia di San Luca even as it also alludes to his uncle's Villa in the Veneto project.²⁴⁷ This is hardly surprising since the programme explicitly called for a centralized church dedicated to the adoption of the academic emblem.²⁴⁸ It is

²⁴⁶ On the allusion of Ercolani's project to the academic emblem, see HAGER, *Filippo Juvarra e il concorso*, p. 30, note 133 on p. 56; IDEM., "The Accademia," p. 131; and MUNSHOWER, ed., *Architectural Fantasy*, p. 74.

²⁴⁷ On the allusion of Carlo Stefano Fontana's project to the academic emblem, see BRAHAM/HAGER, *Carlo Fontana*, p. 108, figs. 238-239; OECHSLIN, "Il soggiorno," p. 411, note 3, fig. 46; MUNSHOWER, ed., *Architectural Fantasy*, p. 74, fig. IV-g. On Carlo Stefano Fontana's project, see also BENEDETTI, "L'architettura dell'Arcadia," p. 351, figs. 2-3; W. OECHSLIN, "Aspetti dell'internazionalismo nell'architettura italiana del primo Settecento," in Palumbo, ed., *Barocco europeo*, pp. 141-155, here p. 144, note 3; IDEM., *Bildungsgut*, p. 110, note 4 on p. 175, p. 111, note 6 on p. 176, p. 134, note 83 on p. 183; MARCONI/CIPRIANI/VALERIANI, *I disegni*, II, p. 8, nos. 2141-2142, figs. 2141-2142; and MUNSHOWER, ed., *Architectural Fantasy*, p. 35.

²⁴⁸ IBID., p. 35.

similar to Ercolani's design for a triangular church in having three chapels and three entrances, alternating one with the other around a spatial core. Again, there is no accommodation made for the liturgical axis. All three chapels are equal in size and shape and all three entrances are equal in size and shape as well, with none of the chapels and none of the entrances distinguished in any way from the others, and none provided with any indication as to which one is the main chapel or the main entrance. The allusion to the academic emblem, implicit in the plan of the project, is made explicit by Carlo Stefano's depiction of the actual emblem itself on each of the two sheets.²⁴⁹ By means of the equal treatment given to the three chapels, and to the three entrances, Carlo Stefano Fontana's triangular temple project gives convincing expression to the academic ideal of the equality and unity of the three visual arts as promoted by the emblem. One is tempted to think of each of the three chapels as having been consecrated to one of the three arts. In a sense then, Carlo Stefano Fontana's church design becomes its own emblem, one in which the equal power of the visual arts, as both a value and an ideal, is embodied in architectural form.

Three years later, in 1725, Giovanni Giacomo Pelliccia designed another academic project for a triangular temple, this one for the *Concorso Clementino* competition, that again alludes to the emblem of the Accademia (Figure 4.86).²⁵⁰ The temple does not stand alone, but is centered within a

²⁴⁹ The emblem is depicted at the bottom of both sheets, the one sheet displaying the plan and the other sheet displaying the exterior elevation, as part of the representation of the round medallion and scroll upon which the index is inscribed.

²⁵⁰ Pelliccia's triangular temple is also a variation on Carlo Fontana's project for a Villa in the Veneto. On Pelliccia's project, see OECHSLIN, "Contributo," p. 63, fig. 20; IDEM., *Bildungsgut*, p. 129, note 61 on p. 181; and MARCONI/CIPRIANI/VALERIANI, *I disegni*, I, p. 13, nos. 305-308, figs. 305-308.

dodecagonal piazza surrounded by a building block. Once again no accommodation is accorded to the liturgical axis of the church, with the three chapels given equal shape and size. In this case, however, and unlike the earlier projects for triangular temples by Pozzo, Ercolani, and Carlo Stefano Fontana, the chapels are depicted complete with their altars.

Yet another allusion to the academic emblem is the triangular project for the New Sacristy of St. Peter's designed in 1715 by Antonio Valeri (1648-1736),²⁵¹ an academician who had studied under Bernini and who had succeeded Carlo Fontana as architect of St. Peter's (Figure 4.87).²⁵² The church is an equilateral triangle in plan with a central circular space capped by a drum and dome, and surrounded on the three corners by oval sacristies and on the three sides by entrance vestibules that also serve to connect the sacristies.²⁵³ Variants of Valeri's scheme recur in Gaetano Chiaveri's project for a church dedicated to the Holy Trinity (1722), and Giovanni Antinori's project for a triangular villa for Cardinal Neri Corsini in Rome (1755).²⁵⁴

²⁵¹ On Valeri and his triangular church project, see U. VALERI, *L'ultimo allievo del Bernini: Antonio Valeri* (Rome, 1958); HAGER, *Filippo Juvarra e il concorso*, pp. 28-33, notes 125-135 on p. 56, figs. 28-29; IDEM., "The Accademia," p. 132, fig. 7-c; MUNSHOWER, "Filippo Juvarra, Carlo Stefano Fontana," pp. 78-79, fig. 74; IDEM., ed., *Architectural Fantasy*, p. 35; and SMITH, *Architectural Diplomacy*, pp. 67-68, fig. 35.

²⁵² Valeri became a member of the Accademia di San Luca on 3 May 1696 for which he submitted, as his *dono accademico*, a project for an octagonal church; see BENEDETTI, "L'architettura dell'Arcadia," p. 364, note 1, figs. 24-25; and SMITH, *Architectural Diplomacy*, pp. 67-68, figs. 33-34.

²⁵³ HAGER, "The Accademia," p. 132, describes Valeri's scheme as "...well suited for allusions of a secular kind..."

²⁵⁴ MUNSHOWER, "Filippo Juvarra, Carlo Stefano Fontana," p. 79, note 134 on p. 94; HAGER, "The Accademia," p. 132, note 33 on pp. 138-139, figs. 7-f, 7-h. Chiaveri's church was commissioned by the Russian Tsarina, Katharina, wife of Peter the Great, for a site in Korostino (near Novgorod), her place of origin; see C. CARAFFA, "Un riflesso dell'Accademia di San Luca da Roma a San Pietroburgo: il progetto di Gaetano Chiaveri per una chiesa della Trinità a Korostino," *Pinakothek* 16-17 (2003), pp. 142-150. Chiaveri himself was an academician, elected to membership in the Accademia di San Luca in 1746. Antinori was also

The triangular-hexagonal *parti* continued to be applied to church designs for the *Concorso Clementino* competitions well into the eighteenth century. It appears again in Francesco Collecini's project, a third prize winner, in the First Class competition in architecture of 1750 (Figure 4.88).²⁵⁵ The subject of the competition that year, a College of Arts and Sciences, was an elaboration on the subject given in 1708, and so it is not surprising that Collecini should have taken his cue from Ercolani's earlier project. However, Collecini's design is a weaker version of the original. The college itself is no longer a triangle in plan but a quadrangle, its core no longer occupied by the church but by a large piazza surrounded on four sides by pavilions. The church abuts the exterior flank of one of the pavilions, with the external walls surrounding the triangular-hexagonal space of the church *pochéed* to produce a rounded perimeter. The triangular-hexagonal arrangement is recognizable only in the church interior, and here Ercolani's influence is unmistakable. Three large niches alternate with three small ones, with the large niches reserved for chapels and the small ones reserved for entrances in a design that, once again, alludes to the triangular emblem of the Accademia di San Luca, and traces its pedigree ultimately to Carlo Fontana's project for a Villa in the Veneto.²⁵⁶

There is also Gabriel-Pierre-Martin Dumont's project for a triangular temple that he submitted to the Accademia di San Luca on the occasion of his

associated with the Accademia, a student there and second prize winner in the Second Class competition in architecture of the *Concorso Clementino* of 1754.

²⁵⁵ On the *Concorso Clementino* of 1750 and Collecini's project, see MARCONI/CIPRIANI/VALERIANI, *I disegni*, I, p. 18, nos. 471-476, figs. 471-476; and CIPRIANI, ed., *Æqua Potestas*, pp. 141-142, nos. IV.32 – IV.34.

²⁵⁶ *IBID.*, p. 141.

election as *accademico di merito* in 1746 (Figure 4.89).²⁵⁷ It is dedicated to the three visual arts, and represents a ‘Temple of Art’ divided into three projecting blocks, each one designated for one of the visual arts, and three entrances opening onto a central hexagonal space, the “Temple of Taste,” capped by a dome. It is an elegant variation on Carlo Stefano Fontana’s 1722 project for a triangular temple, and is yet another allusion to the triangular emblem of the Accademia di San Luca as well as to Carlo Fontana’s Villa in the Veneto project.²⁵⁸

In short, it became common practice, beginning in 1705 with the adoption of the new academic emblem and continuing for many decades thereafter, for students and professors of the Accademia di San Luca to devise triangular-hexagonal projects that allude directly to the emblem. Such projects by Juvarra, Carlo Stefano Fontana, Ercolani, Pelliccia, and others are all conserved at the Accademia di San Luca and thus were readily available to Vittone when, in May and June of 1732, he attempted the First Class competition in architecture of the *Concorso Clementino*.²⁵⁹

²⁵⁷ The drawing is inscribed: “Plan d’un de la Peinture, Sculpture, et Architecture, ou Chacun de ces Arts se trouve un Temple réunit à celui du Goût.” On Dumont’s project, see OECHSLIN, “Aspetti dell’internazionalismo,” p. 149, note 14; MARCONI/CIPRIANI/VALERIANI, *I disegni*, II, p. 8, nos. 2137-2138, figs. 2137-2138; and MUNSHOWER, “Filippo Juvarra, Carlo Stefano Fontana,” pp. 79-80, note 135 on p. 94, fig. 76.

²⁵⁸ See OECHSLIN, “Aspetti dell’internazionalismo,” p. 144, note 3, who draws comparisons between Dumont and Carlo Stefano Fontana’s triangular temple projects.

²⁵⁹ Two other hexagonal church projects submitted to the Accademia di San Luca, one by Domenico Martinelli and the other by Filippo di Leti, were also available to Vittone. They were drawn up in connection with the *Concorso Accademico* of 1680, the *soggetto* of which called for a church with a hexagonal plan, and thus they predate both Fontana’s Villa in the Veneto project of 1689 and the adoption of the new academic emblem in 1705. The competition was won by Martinelli, the only competitor and the only prize winner. His design does not survive in the Accademia’s archive, but Di Leti’s design does, a design related to the *Concorso* of 1680 but not officially part of it. See MARCONI/CIPRIANI/VALERIANI, *I disegni*, I, p. 3, no. 10, fig. 10, who, however, erroneously identifies Di Leti’s project as belonging to the *Concorso Accademico* of 1677. See also SMITH, *Architectural Diplomacy*, pp. 113-114, pls. 13-15, who correctly identifies it as having been conceived in conjunction with the

Vittone drew upon these precedents, and especially upon Ercolani's project, for his own designs for triangular-hexagonal chapels with interlaced ribbed vaults which he included in his academic project. The topic of Vittone's project was, it will be recalled, *A City Surrounded by the Sea*, and the task description called for an Academy of Arts and Sciences (one of eight institutions so designated) to be housed on the Grand Piazza of the harbor city.²⁶⁰ Vittone located his Academy of Arts and Sciences in the building block of the lower left quadrant of the urban center. Vittone specified the subjects to be taught in the academic complex as painting, drawing, sculpture, surveying, architecture, fortifications, anatomy, mathematics, geometry, medicine, law, philosophy, theology, astronomy, and physics. Special importance was given to the theme of the visual arts in the *Concorso Clementino* that year,²⁶¹ and so it is not surprising that Vittone should have consulted Ercolani's project for an Academy of Fine Arts and Church and adapted it to his own chapel designs for the *Concorso Clementino*.²⁶²

Concorso Accademico of 1680, unofficially, perhaps as part of di Leti's *dono accademico*, although Di Leti was not officially accepted as a member of the Accademia until 1692. Nevertheless, Smith considers the hexagonal *parti* to have been an isolated solution without influence, concluding (p. 113) that "...the fact that hexagonal churches had as little a future as a past, should leave no hope of finding a legacy for the *concorso* in architecture of 1680 and there is none."

²⁶⁰ CHALLINGSWORTH, "The Academy of Arts," pp. 724-725.

²⁶¹ For example, the oration read by Luca Piccolomini on the occasion of the awarding of the prizes at the Campidoglio that year was entitled "The Triumph of the Three noble and beautiful Arts of Painting, Sculpture and Architecture shown at the Campidoglio..." (Atti dell'Accademia di S. Luca, Tome V), documenting the *Concorso Clementino* competitions of 1725, 1728, and 1732; see BENEDETTI, "L'architettura dell'Arcadia," pp. 343-345, note 1 on p. 343.

²⁶² MUNSHOWER, ed., *Architectural Fantasy*, p. 74, observes that Ercolani's project, conserved in the archives of the Accademia di San Luca, was of particular interest to the instructors and students there.

Indeed, it was Vittone's practice to study and copy drawings from previous *Concorsi* competitions and to incorporate aspects of them into his own designs. For example, he made copies of Pompeo Ferrari's academic design of 1681 for a church with a circular plan that itself is derived from Carlo Fontana's Sanctuary at Loyola, Spain.²⁶³ Vittone also copied Ferrari's prize-winning *Concorso Accademico* project of 1694 for a church in the center of symmetrically placed courtyards.²⁶⁴ The influence of Ferrari's project can be seen in Vittone's *Concorso Clementino* project of 1732, specifically in the lateral wings of his design for a bridge with a triumphal arch (Figure 1.12) whose giant order and large number of openings and windows are translations of an analogous system of decoration on the elevation of Ferrari's project.²⁶⁵ Vittone also made a copy of the façade elevation of Pietro Paolo Scaramella's prize-winning project of 1704 for the Second Class competition in architecture of the *Concorso Clementino*,²⁶⁶ and a copy of the plan of Kaspar Barzanka's prize-

²⁶³ Vittone's copies appear on three sheets conserved in the Musée des Arts Décoratifs in Paris; see HAGER, "Carlo Fontana and the Jesuit Sanctuary," p. 286, note 42; and CANAVESIO, "Presenze gesuitiche," p. 281.

²⁶⁴ Ferrari's drawings are located in the Accademia di San Luca in Rome (*Archivio Storico*, Cart. B 353, 362, 381, 382). Vittone's copies are in the Musée des Art Décoratifs in Paris (II, 146 and 148). See WITTKOWER, "Vittone's Drawings," pp. 166-167, notes 20-21; OECHSLIN, "Il soggiorno," p. 399, note 1, figs. 1-2; IDEM., *Bildungsgut*, p. 19, note 31 on p. 43; p. 138, note 16 on pp. 185-186, who, however, erroneously dates Ferrari's project to 1678; MUNSHOWER, ed., *Architectural Fantasy*, pp. 8-16; HAGER, "The Accademia," p. 135, note 69 on p. 140; and SMITH, *Architectural Diplomacy*, pp. 165-167, 210, figs. 108-109.

²⁶⁵ OECHSLIN, "Il soggiorno," p. 399, note 1, fig. 3; IDEM., *Bildungsgut*, p. 138, note 16 on pp. 185-186. The influence of Ferrari's project can also be seen in Vittone's design for the Ospizio di Carità at Carignano; see STARGARD, "Repression," p. 143.

²⁶⁶ Paris, Musée des Art Décoratifs, II, no. 182. See WITTKOWER, "Vittone's Drawings," p. 167, note 21; OECHSLIN, "Il soggiorno," p. 399, note 2; IDEM., *Bildungsgut*, p. 138, note 17 on p. 186; HAGER, "The Accademia," p. 135, note 70 on p. 140; and SMITH, *Architectural Diplomacy*, p. 210. On Scaramella's academic project, see MARCONI/CIPRIANI/VALERIANI, *I disegni*, I, p. 6, nos. 123-125, figs. 123-125. The topic of the Second Class competition in architecture of the *Concorso Clementino* of 1704 was a "Tempio a impianto centrale."

winning project for the First Class competition in architecture of the *Concorso Clementino* of the same year.²⁶⁷

In his own *Concorso Clementino* project of 1732 Vittone introduced, as discussed above, two types of chapels with interlaced ribbed vaults, a hexagonal type and a triangular type, both of which take as their points of departure Ercolani's academic church design. The first type of chapel, appearing four times in the corners of the Greek cross church in the lower right building quadrant of the urban center, is a variation on the upper storey of Ercolani's church. It is a hexagon in plan with a vault comprised of six ribs (Figure 4.35). The second type of chapel, appearing only once in an annex building in the upper left building quadrant, is a variation on the ground storey of Ercolani's church. It is a triangle in plan with a vault comprised of three ribs (Figure 4.36). But it also incorporates a central rotunda within the triangular perimeter. This is the same theme, the interplay of a triangle and a circle, which had been frequently developed at the Accademia di San Luca and in the studio of Carlo Fontana.²⁶⁸ A concave niche occupies each angle, and an entrance bisects each side of the triangle, with the niches and entrances alternating with, and facing across, one another. In all of this Vittone's triangular chapel is identical to the ground floor of Ercolani's academic church project. However, the perimeter walls of Vittone's chapel do not form an equilateral triangle, as they do in Ercolani's church, but a right triangle.

²⁶⁷ Paris, Musée des Art Décoratifs, II, no. 144. See OECHSLIN, "Il soggiorno," p. 399, note 2; IDEM., *Bildungsgut*, p. 138, note 17 on p. 186; and SMITH, *Architectural Diplomacy*, p. 210. On Barzanka's project and the *Concorso Clementino* of 1704, see MARCONI/CIPRIANI/VALERIANI, *I disegni*, I, p. 6, nos. 106-107, figs. 106-107. See also MUNSHOWER, ed., *Architectural Fantasy*, pp. 17-29, figs. II-6, II-7, in which the precedent for Barzanka's main building block is identified (p. 18) as Carlo Fontana's Villa in the Veneto project (although Barzanka's employs an overall quadrangular format in place of Fontana's triangular-hexagonal one).

²⁶⁸ HAGER, "The Accademia," p. 133.

Unlike Ercolani, who gives no indication as to the location of the main altar of his church, Vittone marks the position of the main altar in his chapels by means of a cruciform symbol. In his hexagonal chapels in the Greek cross church, Vittone positions the altar opposite the adjoining crossing pier of the church. In his triangular chapel in the annex building, he positions the altar in the niche embedded within the 90-degree angle of the triangle. Although there are three entrances to this chapel, it is clear that one of them, the one that bisects the hypotenuse of the triangle, is the principal one, not only because it faces opposite the altar but because it is preceded by a portico and, before that, a courtyard, whereas the other two entrances open onto small interior rooms.

The five triangular-hexagonal chapels with interlaced ribbed vaults are not prominent features of Vittone's *Concorso Clementino* project, but small, minor ones that appear as an afterthought. Yet, they are important features. And there can be no doubt that they allude to the triangular emblem of the Accademia di San Luca, having been modeled after Giuseppe Ercolani's triangular project for an Academy of Fine Arts and Church that itself alludes directly to the academic emblem. This was only natural since the task description of Vittone's project called for an Academy of Arts and Sciences. Nevertheless, Vittone makes no direct, formal link between the Academy of Arts and Sciences itself and the triangular-hexagonal chapels since he locates the former in the building block of the lower left quadrant of the central piazza, and the latter in the upper left and lower right quadrants. Still, however casually they may be conceived and presented, Vittone's academic designs for triangular-hexagonal chapels with interlaced ribbed vaults are significant for their reference to the academic emblem, and for their debt to

Ercolani's project for an Academy of Fine Arts and Church, and, less directly, to Fontana's project for a Villa in the Veneto.

Upon completing his studies at the Accademia, Vittone continued to draw inspiration from Ercolani and Fontana's triangular-hexagonal projects. His schematic project for a triangular church depicted on a sheet conserved in the Musée des Arts Décoratifs, and dated in all probability to the late 1730s, features a central rotunda surrounded by three projecting rectangular chapels alternating with three concave periphery walls (Figure 4.90).²⁶⁹ Small circular rooms containing the entrance vestibule and the two *coretti* bestride the concave periphery walls, curving both outward and inward in a manner that contributes much to the general play of curve and counter-curve. As such it is generally understood to be a Guarinesque scheme, one that attests to the specific influence of the Sindone in which circular entrance vestibules likewise bestride the rotunda wall (Figure 4.66).²⁷⁰ But it is also very much a Juvaresque scheme, recalling in particular Juvarra's "Royal Palace in a Villa" project of 1705 in which three oval salons project outward from the recessed periphery walls of the building block (Figure 4.79). And just as Juvarra's project alludes directly to the triangular emblem of the Accademia, so too does Vittone's triangular church project. In its alternation of projecting rectangular and concave curvilinear walls around a central rotunda, Vittone's project also

²⁶⁹ Paris, Musée des Arts Décoratifs, II, no. 209. CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 21, no. 25, fig. 30, dates the project to sometime before 1740. WITTKOWER, "Vittone's Drawings," p. 171, note 66, dates it to the late 1730s. See also CARBONERI, "Guarini ed il Piemonte," p. 357, fig. 24; and MEEK, *Guarino Guarini*, p. 158, fig. 157.

²⁷⁰ On the Guarinesque character of Vittone's project, see CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 21, no. 25, fig. 30; WITTKOWER, "Vittone's Drawings," p. 171, note 66; CARBONERI, "Guarini ed il Piemonte," p. 357; and MEEK, *Guarino Guarini*, p. 158, fig. 157. It is on the basis of its resemblance to the Sindone that Wittkower dates the scheme to the late 1730s when Vittone's interest in Guarini's architecture was at its peak.

resembles the second stage of Carlo Fontana's Villa in the Veneto project and, even more precisely, Carlo Stefano Fontana's Triangular Temple project, itself a direct allusion to the academic emblem.²⁷¹ For just as Carlo Stefano transformed the rectangular apartment blocks of his uncle's original Villa project into rectangular chapels for his church project, so too Vittone transformed them into rectangular chapels for his scheme.

It is unclear how the central congregational space of Vittone's schematic project was to have been vaulted. There are faint intersecting lines on the drawing that indicate an interlaced ribbed dome arranged in the shape of a six-pointed star, but they may instead be regulating lines used to facilitate the layout of the geometric figure of the church plan. Vittone may well have intended an interlaced ribbed dome, but the design is too schematic to make a determination. What is clear is that Vittone adapted the design to liturgical use. Unlike Pozzo, Ercolani, and Carlo Stefano Fontana, all of whom outfitted their triangular church projects with chapels of equal size and shape, Vittone equipped his triangular church project with a clearly demarcated main chapel positioned opposite a clearly demarcated entrance to form a proper liturgical axis. Vittone differentiated the main chapel from the two minor ones by increasing its size and by terminating it with a curved apsidal wall in contrast to flat rectilinear walls. Vittone located the entrance opposite the main chapel, and fronted it with a portico that further emphasizes the liturgical axis. It is the only entrance to the church, and it occupies one of the three secondary circular spaces, the other two of which house *coretti*. In short, Vittone's

²⁷¹ According to OECHSLIN, "Il soggiorno," p. 411, note 3, Carlo Stefano Fontana's Triangular Temple project also influenced Vittone's *Concorso Clementino* project of 1732, with its arrangement of diagonally disposed towers having been translated by Vittone into a similar arrangement of towers that front one of the four churches facing onto the Grand Piazza.

triangular church scheme is not just an abstract exercise but also a practical design that, unlike similar earlier academic projects, accommodates the requirements of liturgy. Perhaps Vittone made this accommodation in response to a real commission, although the scheme is unrelated to any known church or church project that Vittone designed.

Vittone also employed the triangular-hexagonal *parti* in some of his preliminary designs for Santa Chiara at Vercelli conserved in the Musée des Arts Décoratifs. Again, it is unclear how the central congregational space of these designs was to have been vaulted. There is no indication of an interlaced ribbed dome in any of the designs, and the final version of the church was built with an umbrella dome. Two of the designs, one a rough schematic sketch (Figure 4.57) and the other a more polished and detailed drawing (Figure 4.58), are practically identical in plan to that of Vittone's project for Santa Chiara at Alessandria.²⁷² Concave niches alternate with convex ones around a central hexagonal space, with the concave niches reserved for altars and the convex ones for the entrance and the two *coretti*. Again, the main chapel is distinguished from the other two by its larger size and rounder contour in plan. In all of this the two Paris designs are identical to the project for Santa Chiara at Alessandria. In the Paris designs, however, the main chapel is terminated by a solid apsidal wall instead of a screen of columns leading to a choir beyond.

Two other Paris designs for Santa Chiara at Vercelli, the last ones to have been drawn up, minimize the triangular articulation so prominent in the

²⁷² Paris, Musée des Arts Décoratifs, II, nos. 206 verso, 207. See CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 20, no. 22, figs. 24-25; WITTKOWER, "Vittone's Drawings," p. 171, note 65, fig. 10; and OECHSLIN, "Vittone e l'architettura," p. 34, note 1.

first two designs, and emphasize instead the hexagonal articulation (Figures 4.60-4.61).²⁷³ They combine aspects of both the Visitazione at Vallinotto and Vittone's first project for Santa Chiara in Turin, but again without those features that so conspicuously characterize the originals, namely the interlaced ribbed dome and, with respect to the Visitazione at least, the apsidal screen of columns that terminates the presbytery. It is these last designs that anticipate the final version of the church as it was constructed and illustrated in *Istruzioni diverse* (Figure 4.62).

The Borrominesque and Guarinesque character of Vittone's preliminary designs for Santa Chiara at Vercelli is undeniable, but so too is the Fontanesque character. This is true of all of Vittone's triangular-hexagonal church designs, and in particular those with interlaced ribbed domes. The earliest of these, the Visitazione at Vallinotto, begun just five years after Vittone graduated from the Accademia di San Luca and just one year after he completed his edition of Guarini's *Architettura civile*, is an eclectic and synthetic work that owes as much to Vittone's study of Fontana's drawings in Cardinal Albani's library as it does to his mastery of Guarini's theory. In light of this, the tri-partite organization of the Visitazione, manifest in both plan and section (Figures 4.39-4.41), may be reinterpreted. It is commonly and quite correctly understood to allude to the Holy Trinity, as discussed above, but it may also be understood to have an additional secular significance linked to the emblem of the Accademia di San Luca. After all, the Star of David, the form in which the ribs of the Vallinotto dome are configured, is generated by the intersection and rotation of two equilateral triangles, the very geometric

²⁷³ Paris, Musée des Arts Décoratifs, II, nos. 143, 208. See CARBONERI/VIALE, eds., *Bernardo Vittone*, pp. 30-31, no. 63, figs. 107-108; and WITTKOWER, "Vittone's Drawings," p. 171.

figure that comprises the emblem of Accademia di San Luca. Consequently, the Visitazione expresses and celebrates, by means of its comprehensive tripartite design, the equal power of the three visual arts as symbolized by the academic emblem, thus serving as a reminder of Vittone's academic training and credentials.²⁷⁴ The Visitazione was designed in 1738, only two years after Juvarra died and just one year before King Carlo Emanuele III would settle on his choice for a new royal architect, and thus its design, with its veiled reference to the academic emblem, would have served as an advertisement to the king of Vittone's academic status and professional promise.

The combination of Borrominesque, Guarinesque, Fontanesque, and Juvarrisque elements that characterizes the Visitazione also characterizes Vittone's project for Santa Chiara at Alessandria, its offshoot San Luigi Gonzaga at Corterano Monferrato, and Vittone's first project for Santa Chiara in Turin. For if these triangular-hexagonal church designs are understood to be derivatives of Sant'Ivo and the Sindone, then they must also be understood to be derivatives of Fontana's Villa in the Veneto project and its progeny produced at the Accademia di San Luca. Likewise, if their interlaced ribbed domes are viewed as derivatives of Guarini's dome of San Lorenzo, then they must also be viewed as derivatives of the dome of Ercolani's academic project for an Academy of Fine Arts and Church. In other words, both the triangular-hexagonal plan and the interlaced ribbed dome of Vittone's Visitazione and similar church designs trace their pedigree not only to the *bizzarria* of

²⁷⁴ The Visitazione gives further expression to the unity and equality of the visual arts by means of its systematic and comprehensive bringing together of frescowork, stuccowork, and architecture in a convincing and astonishing *Gesamtkunstwerk*, a union of the arts that Vittone himself notes in his description of the church in *Istruzioni diverse*, p. 186: "...la quale poi il medesimo fece per mano di assai valenti Soggetti in tutte le di lei parti nobilmente ornare si stucchi, e pitture, e dotò in fine d'un convenevole Beneficio per un Cappellano..."

Borromini and Guarini, but also to the orthodox academicism of Fontana and his successors.

Scholars have long emphasized the Guarinesque and Borrominesque character of Vittone's triangular-hexagonal church designs, particularly those with an interlaced ribbed dome, but have largely minimized their Fontanesque character. Furthermore, they have concluded that the Visitazione and other Guarinesque churches and church projects of Vittone's early practice reflect little or nothing of Vittone's academic training, but instead form a sharp break with it. Millon, for examples, writes:

After [Vittone's] return to Turin, and for the remainder of his life, his works, except for his treatises, subordinate his academic experience to what he had learned from Guarino Guarini and Juvarra.²⁷⁵

Pommer writes:

[Vittone's] academicism had a decisive influence on his architectural treatises, which he apparently conceived about this time, but hardly any at all upon his architecture. In part that difference reflected the common split in the seventeenth and eighteenth centuries between the academic, with its long literary tradition, and the bizarre, the technical, or the practical, which had less in Italian treatises to support them. Vittone's Piedmontese leanings towards the latter were little altered by his late and brief training in Rome...²⁷⁶

Perogalli writes:

²⁷⁵ MILLON, "Vittone," in *Macmillan Encyclopedia*, p. 343.

²⁷⁶ POMMER, *Eighteenth-Century*, p. 108.

Moreover, in spite of his academic preparation in Rome, Vittone's first architectural works were deeply rooted in the recent Piedmontese tradition...²⁷⁷

Passanti writes:

Nothing of a direct Roman influence, however, is revealed in this work [i.e., the Visitazione], but rather that of the two greatest architects who had worked in Turin before him, Guarini and Juvarra.²⁷⁸

And Portoghesi, while acknowledging the importance of Vittone's Roman sojourn on his subsequent designs for Neo-Guarinian churches, nevertheless credits this not to Vittone's academic training, which he views as antithetical to the architect's Piedmontese production, but to Vittone's exposure to the Neo-Borrominian and Rococo architectural culture then prevalent in Rome:

Vallinotto is the perfect antithesis of what the Roman masters had sought to inculcate in the mind of the young recruit and in any case reflects the influence of prohibited readings from Borromini and from the architects of the Roman Rococo, with whom Vittone probably had at least random contacts.²⁷⁹

Portoghesi adds that Vittone's academic experience in Rome underwent a radical reversal by his subsequent work on Guarini's *Architettura civile*.²⁸⁰

²⁷⁷ PEROGALLI, "Nota sull'architettura," p. 876: "Inoltre, malgrado la sua preparazione romana, le prime opere sue ce lo assicurano profondamente radicato nella allora recente tradizione piemontese..."

²⁷⁸ PASSANTI, *Architettura in Piemonte*, p. 175: "Non però la diretta influenza romana si dimostra in questa opera bensì quella dei due massimi architetti che in Torino avevano operato prima di lui, Guarini e Juvarra."

²⁷⁹ PORTOGHESI, "Metodo e poesia," p. 100: "Il Vallinotto è la perfetta antitesi di ciò che i maestri romani avevano cercato di inculcare nell'animo della giovane recluta e risente semmai delle proibite letture da Borromini e dagli architetti del rococò romano, con cui Vittone probabilmente ebbe almeno fuggevoli contatti."

²⁸⁰ IDEM., *Bernardo Vittone*, p. 96: "Per incarico dei padri Teatini, egli cura l'edizione del trattato di *Architettura Civile* del quale erano state pubblicate nel 1686 soltanto le incisioni."

Even Oechslin himself, who stresses the importance of Carlo Fontana's influence on Vittone's architectural formation, concludes that Vittone's Roman sojourn was nothing more than an 'episode' with no lasting consequence of import.²⁸¹ Likewise, Hellmut Hager concludes that Vittone's Roman period exerted no appreciable or lasting impact on the architect:

Apart from certain reminiscences, certainly quite often discernible especially in Vittone's theoretical work, Bernardo Antonio's growth as an architect, which was much more strongly influenced by Guarini's buildings, would doubtless have developed, even without the period in Rome, in more or less the same way.²⁸²

Finally, Gil Smith observes that, while exercises at the Accademia di San Luca regularly made use of hexagonal planning, Vittone's hexagonal church designs were indebted more to Guarini's work than to his academic training:

...there was one architect, Bernardo Vittone of Piedmont, who passed through the Accademia as a student (1732) and later made use of a hexagonal plan for his first church, the Sanctuary of Vallinotto (1738-39). Exercises using hexagonal geometries may have been a routine part of his and other students' experiences at the Accademia, and may have been a point of departure for him. But there is in his mature work more of Guarini, whose treatise he edited and published (1737), than of the Accademia, and the hexagon more probably was influenced by his predecessor's mathematical approach.²⁸³

L'incontro con le idee e con il metodo che informo l'opera, diligentemente studiata e reintegrata, ha una importanza decisiva; fino al '40 almeno le ipotesi assorbite in questo lavoro di filologia permeano l'attività di Vittone, la condizionano orientandola verso una radicale rovesciamento delle sue posizioni."

²⁸¹ OECHSLIN, *Bildungsgut*, p. 146: "Für Vittone bleibt somit der römische Aufenthalt zwar Episode, kurze Zeit der Ausbildung voll Hoffnungen und Glanz, für die Charakterisierung und die Einsicht in die Vielseitigkeit der römischen Kunst um 1730 bleibt er aber ein wertvolles Zeugnis."

²⁸² HAGER, Review of *Bildungsgut*, p. 816.

²⁸³ SMITH, *Architectural Diplomacy*, p. 344, note 105.

And yet, as we have seen, the very features that identify Vittone's churches as Borrominesque and Guarinesque in character have precedents as well in the architectural designs by Fontana and his followers at the Accademia di San Luca. Vittone was himself an academician — elected full member to the Accademia by right of his victory in the *Concorso Clementino* competition of 1732. He had apprenticed under an illustrious academician, Juvarra, who in turn had apprenticed under another illustrious academician, Fontana. It is not surprising then that Vittone, like his fellow academicians, should have drawn inspiration from Fontana's project for a Villa in the Veneto and many related academic projects. Nor is it surprising that Vittone's designs should have alluded to the triangular emblem of the Accademia di San Luca. In short, the Visitazione and his other triangular-hexagonal churches and church projects with interlaced ribbed domes do not represent the break with Vittone's experience at the Accademia di San Luca as scholars have generally affirmed, but instead represent a continuation and extension of that experience, one that nevertheless married very well with Borrominesque and Guarinesque themes.²⁸⁴ Nor was Vittone the first of Fontana's followers to have devised triangular-hexagonal schemes based on precedents that were both, at one and the same time, academic and Guarinian in nature. Fischer von Erlach, whose *Historischen Architektur* was so central to Vittone's architectural formation in

²⁸⁴ For an opposing view, that a strong continuity exists between Vittone's academic education and his later practice, see STARGARD, "Repression," p. 143, who argues that Vittone adapted the large building complexes at the urban center of his *Concorso Clementino* project of 1732 to his subsequent institutional buildings erected to house the poor. Stargard writes: "The similarity between the two shows a willingness on the part of the architect to adapt his academic designs from the beginning of his career for one of his later commissions. It is significant, furthermore, that Vittone's winning 1732 design included several institutional buildings, although no poorhouses, adjoining the domed church. In this regard, his entry at the *Concorso Clementino* stands as the first in a line of commissions, including those at Carignano, Casale Monferrato, Pinerolo, and Turin, involving institutional buildings."

Rome, also drew upon the same Fontanian and Guarinian precedents for his designs for small garden pavilions of the 1690s (Figure 4.78).²⁸⁵

It is a significant circumstance of his architectural formation that within the span of just a few years, between 1733 and 1735, Vittone had managed to gain private access first to Fontana's architectural drawings in Rome and then to Guarini's architectural writings in Turin. This experience was decisive. Access to either one, Fontana's drawings or Guarini's writings, was at that time severely restricted. Access to both was well nigh unattainable. And yet it was in both the copying of Fontana's drawings and the editing of Guarini's writings that Vittone's architectural formation was crowned. Vittone put the lessons learned to good use. His genius was to discover improbable parallels in the architecture of these two late seventeenth-century masters, Fontana the orthodox academician and Guarini the unorthodox libertine, and to develop and apply them profitably to his own designs.²⁸⁶ By drawing upon both Fontanesque and Guarinesque sources for his triangular-hexagonal church designs with interlaced ribbed domes, Vittone drew upon opposing architectural approaches — the orthodox and the unorthodox, the conventional and the innovative, the regular and the irregular, the traditional

²⁸⁵ On the Fontanesque character of Fischer Erlach's triangular-hexagonal garden projects, see MUNSHOWER, "Filippo Juvarra, Carlo Stefano Fontana," p. 26, note 57 on p. 39, pls. 21-23. On the Guarinesque character of Fischer von Erlach's projects, see H.G. FRANZ, "Guarini e l'architettura barocca in Boemia ed in Austria," in V. Viale, ed., *Guarino Guarini e l'internazionalità del Barocco*, 2 vols. (Turin, 1970), II, pp. 467-510, here p. 477, fig. 38; W. HAGER, "Guarini e il mondo tedesco," in V. Viale, ed., *Guarino Guarini e l'internazionalità del Barocco*, 2 vols. (Turin, 1970), II, pp. 439-466, here pp. 444-445, 459, fig. 10; and MEEK, *Guarino Guarini*, p. 164, note 23 on p. 184, fig. 165.

²⁸⁶ Vittone's accomplishment followed upon the success of his master, Juvarra, who himself had achieved a happy synthesis of Bernini and Borromini's architecture. Still, Juvarra never quite assimilated the lessons of Guarini's architecture. Vittone, due to the unique circumstances of his native origins and education, was able to master the architectural principles of both Guarini and Fontana, and, in synthesizing them, to reach beyond his master's eclectic range.

and the modern, the serious and the playful, the chaste and the licentious, the natural and the chimerical, the academic and the bizarre — an eclectic combination of approaches that he explicitly promotes on the pages of *Istruzioni elementari*:

...it is useful to observe the Works of the more ancient Architects who were serious and given little to jest, among them Vitruvius, Alberti and Serlio, as well as those of the more licentious modern ones, less sympathetic to simplicity, who reveal themselves to be Cavalier Borromini and Padre Guarini, those compared with the works of Vignola, Michelangelo, Cavalier Bernini, Carlo Fontana and so many other worthy Architects...²⁸⁷

It is in his designs for the Visitazione at Vallinotto and the project for Santa Chiara at Alessandria that Vittone first synthesized these two architectural approaches, a synthesis that, in having adapted “simplicity and naturalness” to “variety and playfulness,” succeeds in gratifying the voluptuous genius of the eye.²⁸⁸

In summary, Vittone’s triangular-hexagonal church designs with interlaced ribbed domes represent the first comprehensive rethinking of

²⁸⁷ VITTORE, *Istruzioni elementari*, p. 412: “...giova osservare le Opere de’ più antichi poco allo scherzo intenti Architetti, quali fra gli altri furono Vitruvio, Alberti, e Serlio, e de’ più licenziosi, e meno della naturalezza amici moderni, quali si dimostrarono il Cavalier Borromino, ed il Padre D. Guarino, quelle confrontando colle opere del Vignola, del Buonaroti, del Cavaliere Bernino, di Carlo Fontana, e di tanti altri valenti Architetti...”

²⁸⁸ IBID., pp. 411-412: “...due esser (siccome da quanto di sovra si è detto deducesi) i punti principale, che conviene aver di mira nella produzione delle idee; acciocchè queste riescano tali, che atte siano a soddisfare il voluttuoso genio dell’ occhio, che è il fine, per cui s’impiegano nelle Fabbriche gli ornamenti. E sono; prima la semplicità, e naturalezza dell’ origine degli oggetti non ordine a quel che rappresentano; secondo la varietà, e lo scherzo delle loro figure. In queste due cose consistono le prerogative, che qualificar debbono gli oggetti, che d’ornamento portano il nome, acciocchè riescano nella forma legittimi, ed atti a produr quell’ effetto, che nella di loro costituzione l’intenzion dell’ Architetto pretende; servendo la prima per escludere dagli ornamenti tutte quelle figure, che troppo facilmente venir possono partorite dall’ umano tutt’ or vaneggiante, e licenzioso capriccio, non ammettando se non quelle, che per la naturalezza loro possono ad essi propriamente convenire; e la seconda per sbandire dagli ornamenti stessi la troppo grande semplicità, e rustichezza.” See also FAGIOLO, “L’universo,” p. 123.

Guarini's architecture in Piedmont to have occurred after Guarini's death, and thus they mark an important chapter in the history of eighteenth-century Piedmontese architecture. They inaugurated the Guarinian revival that arose in Piedmont during the 1730s and continued for several decades thereafter. However, where other Guarinian architects concentrated primarily on the decorative aspects of Guarini's interlaced ribbed domes, Vittone exploited the optical and illusionistic aspects in addition to the decorative ones.

Vittone was unique among Guarini's followers in eighteenth-century Piedmont. He was the only one to have treated the interlaced ribbed dome as an openwork lattice, the only one to have equipped it with multiple, perforated shells, the only one to have illuminated it by means of hidden windows. He was also the only one to have combined it with the open pendentive. Finally, Vittone was the only one of Guarini's followers to have consistently situated the interlaced ribbed dome above the main congregational space of a centralized church, and the only one to have restricted its plan exclusively to a polygon.

Vittone also was the only one of Guarini's followers in Piedmont to have studied in Rome. This background explains in large measure why Vittone was so successful in reinterpreting Guarini's interlaced ribbed domes where other Neo-Guarinian architects in Piedmont were not. For it was in Rome that Vittone studied Borromini and Bernini's architecture first hand, the only one of Guarini's followers to do so.²⁸⁹ And it was in Rome that he

²⁸⁹ Even so, the work of at least one of one of the Neo-Guarinian architects, Gian Giacomo Plantery, Vittone's uncle, shows the unmistakable stamp of Borromini's influence even though there is no record of Plantery having ever visited Rome. For example, the sinuous serpentine ribs and curvaceous swelling shells of Plantery's atrium vaults in the Palazzo Saluzzo Paesana and the Palazzo Cavour bear a striking resemblance to the ribs and shells of Borromini's refectory vault of San Carlo alle Quattro Fontane and to a few of Borromini's

witnessed the Borrominian and Berninian revivals, again the only one of Guarini's followers to do so. In short, Vittone's taste for illusionism owed much to the unique circumstances of his architectural formation in Rome.²⁹⁰ After all, Guarini himself, a century earlier, had received his own architectural formation in Rome. Guarini's interlaced ribbed domes are themselves imbued with a pronounced illusionistic quality that owes much to lessons learned in the Eternal City. It was in Rome that Guarini, like Vittone after him, encountered the illusionistic, open architecture of Bernini and Borromini, the key elements of which — light chambers, concealed windows, basket vaults, and perspectival devices of various sorts — found their way into his *oeuvre* where he adapted them to his own personal and idiosyncratic language.

Vittone's Neo-Guarinian architecture carries with it a rhetorical persuasiveness that is lacking in the Neo-Guarinian architecture of his Piedmontese contemporaries and successors, and it does so precisely because it is informed by the scenographic illusionism that Vittone absorbed from his academic training in Rome. The significance of this training with respect to Vittone's developing taste for Guarini's architecture cannot be overemphasized. Not only was it at the Accademia di San Luca that Vittone designed interlaced ribbed vaults and perspectival windows for the first time, but it was there, in his exposure to Neo-Borrominian and Neo-Berninian architecture, and in his making of numerous copies after drawings of ephemeral decorations and scenographic caprices by Fontana, Pozzo, and

vaults in the Apartment of the Cardinals in the Filippini; see PORTOGHESI, *Rome of Borromini*, pls. 30, 63.

²⁹⁰ The importance of Vittone's direct exposure to Roman Baroque architecture with respect to his subsequent Guarinian production is noted by TAVASSI LA GRECA, *Bernardo Antonio Vittone*, p. 6: "La conoscenza diretta dell'architettura barocca romana gli consente tuttavia un avvicinamento molto più maturo alle opere del Guarini, del quale tra l'altro pubblica nel '37 il trattato di *Architettura civile*..."

others, that he absorbed and mastered the principles of illusionistic design. For it is precisely the illusionistic and scenographic character of Vittone's interlaced ribbed domes that distinguishes them from other such Guarinesque domes in Piedmont.

The Perforated Shell

Background and Precedent

The dome with a perforated shell has its origins in ancient Imperial Rome with the erection of the Domus Aurea, the Pantheon, Hadrian's Villa, and other domical structures in which an opening was inserted into the vertex of the dome.²⁹¹ Additionally, at Hadrian's Villa light was channeled through small passageways carved into the masonry walls and vaults. Such passageways functioned as rudimentary light chambers, defined by Portoghesi as spatial cells "constructed to canalize light in a given direction or to retard its flow by a series of reflections that diminish its intensity and vary its quality and direction."²⁹² It was not until the seventeenth century, however, that these two devices — the vertex opening and the light chamber — were developed into elaborate openwork structures, frequently combined with false ceilings, concealed windows, multiple shells, and perspectival foreshortening to produce an architecture of striking scenographic effect.

²⁹¹ The illumination of a centrally planned room with light introduced from on high, sometimes known as a "chambre à l'italienne," was frequently recommended by eighteenth-century French and Italian architectural theorists; see OECHSLIN, "Vittone e l'architettura," p. 42, notes 1-2, who cites both CORDEMOY, *Nouveau Traité*, p. 157: "...ce que nous appelons Chambre à l'italienne, dont le propre est de ne recevoir le jour que par les fenêtres d'en haut..."; and G. MASI, *Teoria e Pratica di Architettura Civile per istruzione della Gioventù specialmente Romana* (Rome, 1788), p. 74: "La miglior maniera d'illuminare un Edifizio di tal forme è di far venire il lume dal vertice, com'è nel Pantheon..."

²⁹² PORTOGHESI, *Rome of Borromini*, p. 381.

The basic components of the openwork vault were first brought together by Carlo Maderno in his vaults above the side chapels of the nave of St. Peter's (1608-15), in which a pronounced lightening of structure and opening up of mass yield a bright luminosity in contrast to the heavy darkness of Sangallo and Michelangelo's interior.²⁹³ It was Maderno's successors, however, Borromini and Bernini, who, drawing upon their master's innovations, developed and perfected them, often in combination with perspectival diminutions to maximize the illusionistic effect.²⁹⁴

At San Carlo alle Quattro Fontane (1638-41), for example, Borromini inserted windows into the base of the dome that he largely concealed from the spectator's view by means of a constriction of the annular cornice. The dome thereby glows with a diffuse illumination that, set against the relative darkness of the hall below, makes it appear to hover in an aerial perspective that reinforces the geometrical perspective produced by the forced diminution of coffers towards the lantern.

At the Oratory of the Filippini in Rome (begun 1637) Borromini introduced light chambers in the loggia vestibule leading from the smaller courtyard to the church. Here the ideas implicit in Maderno's side chapel vaults of St. Peter's are made explicit. Structure is lightened and mass reduced. Light enters from concealed windows, passes through the light chambers, and empties out through oval perforations in the false ceilings of what are "perhaps the first such open ceilings or vaults in Italy."²⁹⁵ The

²⁹³ HIBBARD, *Carlo Maderno*, pp. 71-72, pls. 68-a, 68-b.

²⁹⁴ Maderno, Borromini, and Bernini were the very same architects, it will be recalled, who developed and popularized the feigned perspectival motif as it was applied to windows, portals, corridors, staircases, and vaults. And indeed, the designing of openwork vaults and feigned perspectives would appear to have been closely related developments.

cramped space of the vestibule is brightly illuminated and optically expanded, its boundaries appearing more open than they actually are.²⁹⁶ Here, in the words of Pommer, “was a structure and articulation appropriate to such lesser chambers as sacristies and small churches, delicate in scale, yet spacious in effect.”²⁹⁷ In time it became the standard model for sacristies and small churches in Rome and beyond.

Borromini also introduced light chambers at San Giovanni in Laterano in Rome (1646-50), situated above the vaults of the outer aisles whereby they illuminate the inner aisles and nave.²⁹⁸ A few years later Borromini designed and built the colonnaded corridor of the Palazzo Spada (1652-53), its salient feature being the perspectival diminution created by the continuous reduction in both height and width of the corridor as it recedes toward the garden (Figure 2.8). By means of light chambers originally inserted into the vault, but which today are walled up, light was channeled, filtered, and reflected “to increase the depth of the colonnade optically by adding to its geometric perspective the effect of aerial perspective.”²⁹⁹ Light chambers of a similar sort also occur in the helical ramp of Borromini’s Palazzo Pamphili.³⁰⁰

During the 1630s in Rome, as Borromini was starting to introduce concealed windows and light chambers in his buildings, Bernini also began to experiment with the very same motifs, but towards a more overtly

²⁹⁵ POMMER, *Eighteenth-Century*, p. 5.

²⁹⁶ IBID., p. 5.

²⁹⁷ IBID., p. 5.

²⁹⁸ PORTOGHESI, *Rome of Borromini*, p. 382, fig. LX, pl. 217.

²⁹⁹ IBID., p. 382, fig. LXXV, pl. 216.

³⁰⁰ IBID., pl. 223.

scenographic end. In his Raimondi Chapel in San Pietro in Montorio (1638-48) Bernini incorporated concealed windows to either side of the altar to illuminate the central scene of the Ecstasy of St. Francis.³⁰¹ The light, its source hidden from the eye, is indirect with respect to the spectator, “but direct and raking with respect to the object it strikes.”³⁰² Bernini incorporated a similar light chamber in the Cornaro Chapel in Santa Maria della Vittoria (1645-52), this one above the altar, to dramatically illuminate the central scene of the Ecstasy of St. Teresa.³⁰³ In Sant’ Andrea al Quirinale (1658-70), Bernini again introduced a light chamber above the high altar to produce a striking scenographic effect, this one enhanced by the sculpted figure of St. Andrew ascending above the tympanum of the aedicule that frames the altar.

The innovations wrought by Borromini and Bernini were developed and extended by generations of their followers in Rome and beyond. One of the earliest was Guarino Guarini, whose novitiate in the Theatine Order in Rome from 1639 to 1647 coincided with the years when Borromini and Bernini were constructing their early works.³⁰⁴ Guarini quickly assimilated the new components — concealed windows, vertex openings, light chambers, and perspectival foreshortening — and applied them to his designs for interlaced

³⁰¹ IDEM., *Roma Barocca*, p. 532, Drawing Appendix Plate VI, fig. C; NOEHLES, “Altari scenografici,” pp. 162-163; SMITH, *Architectural Diplomacy*, fig. 134.

³⁰² F. BORSI, *Bernini* (New York, 1984), p. 162.

³⁰³ PORTOGHESI, *Roma Barocca*, p. 532, Drawing Appendix Plate VI, fig. A; IDEM., “Vittone nella cultura,” fig. 4.

³⁰⁴ Borromini’s works which were commissioned before Guarini finished his novitiate and departed Rome, include the Oratory of the Filippini (1637-52), San Carlo alle Quattro Fontane (1638-41), San Giovanni in Laterano (1646-50), the Re Magi Chapel of the Propaganda dei Fidei (1646-64), and the Palazzo Pamphili (begun 1647). Bernini’s works which were commissioned before Guarini departed Rome, include the monument of Matilda of Canossa in St. Peter’s (1637), the Raimondi Chapel in San Pietro in Montorio (*ca.* 1638), and the Cornaro Chapel in Santa Maria della Vittoria (1645-52).

ribbed domed churches in combination with his own innovations — conic sections and the telescopic stacking and rotation of multiple shells — to produce a striking illusionism.

Guarini, in addition, applied Borromini and Bernini's innovations to his designs for domes without interlaced ribs. One such dome, devised as part of his unexecuted project for San Gaetano at Vicenza (*ca.* 1670), is comprised of two shells springing from a common base, the outer shell enclosing the inner one (Figure 4.91).³⁰⁵ The inner shell serves no meaningful structural function, but is introduced for reason of optics only.³⁰⁶ The intradoses of both shells are marked by a smooth continuous surface upon which illusionistic frescoes are painted. Both the outer and inner shells of the dome were to have been indirectly illuminated by reflected light emanating from hidden windows. The inner shell was to have been perforated by square apertures at the base, hidden from view by the narrowing in diameter of the annular cornice below. The outer shell was to have been perforated by round windows in the haunch, also concealed from view but by the inner shell itself. The combination of concealed windows, vertex openings, and fresco was devised to create an aerial perspective that serves optically to extend the interior height of the church.³⁰⁷

In another unexecuted project, this one for the renovation to the Castello at Racconigi, Guarini designed an openwork vault for the *gran salone*

³⁰⁵ A. ROCA DE AMICIS, "Il progetto di Guarini per la chiesa di S. Gaetano a Vicenza," *Palladio* 12 (July-December 1993), pp. 109-114; S.E. KLAIBER, "A New Drawing for Guarini. San Gaetano, Vicenza," *The Burlington Magazine* CXXXVI:1097 (August 1994), pp. 501-505; M. BARAUSSE, ed., *Guarini a Vicenza: disegni per le chiese di San Gaetano Thiene e dell'Araceli* (Vicenza, 2002).

³⁰⁶ ROBISON, "Optics," p. 398.

³⁰⁷ *IBID.*, p. 398.

that again draws upon and develops the innovations of both Borromini and Bernini (Figure 4.92). Guarini's proposed vault is comprised of two shells, the inner one of which is a sham canopy perforated with large openings through which light, having entered by way of a clerestory above, filters downward. The space between the two shells functions in essence as a large light chamber. Guarini conceived the inner perforated shell as a diaphanous membrane to modulate light, but he also conceived it as an intervening screen to mitigate the excessive height of the *gran salone*.³⁰⁸ It was this capacity of the Racconigi vault to confound the spectator's ability to properly gauge the true boundaries of space, that accounts for its scenographic character.³⁰⁹

Borromini and Bernini's ideas were developed in Rome by Giovanni Antonio Gherardi, a painter and member of the Accademia di San Luca, who designed several small but innovative chapels: the Avila Chapel in Santa Maria in Trastevere (1678-80) and the Santa Cecilia Chapel in San Carlo ai Catinari (1691-99). In the Avila Chapel he employed light chambers and forced perspectives to optically extend the cramped space in both the vertical and horizontal directions (Figure 2.10). Two light chambers, one above the dome and another above the main altar, channel light into the interior. A third light chamber directs light across the side chapel in a manner that recalls

³⁰⁸ Guarini's *gran salone* was projected to occupy a pre-existing space that, in its original state, had been given over to an exterior court open to the sky and, on one of its short sides, to the estate grounds beyond. Once it was decided to enclose the court space it became necessary, in order to provide for sufficient illumination, to extend the height even further with the addition of a clerestory. The resulting increase in height, however, would have proven ungainly, and it is this objectionable increase that the inner shell was presumably intended to allay.

³⁰⁹ Guarini's project is very similar to another one that he conceived for the reconstruction of the Palazzo Madama in Turin in which he again proposed to cap the central *salone* with a double-shelled dome, the inner shell of which is perforated to allow the passage of light emanating from the clerestory above; see ROMANO, ed., *Torino 1675-1699*, pl. 39.

the light *alla bernina* of the Raimondi and the Cornaro Chapels. Bernini's influence is also manifest in the open lantern set inside the oculus of the dome as a structure within a structure, and fashioned as a tabernacle held aloft by four statues of floating angels (Figure 3.35).³¹⁰

Gherardi paid homage to Borromini and Bernini also with his Santa Cecilia Chapel (Figure 3.36). The truncated oval dome is perforated at its crown by a wide oval opening that in turn is capped by a spacious light chamber. By blurring spatial boundaries by means of the multiplication of diaphanous layers of masonry, Gherardi produced the illusion of an expansive space quite in contrast to the actual diminutive size of the chapel. The illusionistic effect is again enhanced by luxurious stucco decoration, here richly painted, and in particular by statues of angels playing musical instruments positioned along the rim of the vertex opening.³¹¹ Above, on the ceiling of the light chamber, is displayed a representation of the Dove of the Holy Spirit in the center of a radiating glory towards which the figure of St. Cecilia ascends. Architecture, sculpture, and painting are all brought together in a striking *Gesamtkunstwerk* to produce a dramatic religious spectacle.

Gherardi's scenographic domes led to designs for a number of similar domes in Rome, including those of Andrea Pozzo's unexecuted projects for San Tommaso di Canterbury (ca. 1681-1703) and the Chapel of the Collegio Inglese (ca. 1680),³¹² Carlo Fontana's Baptistry Chapel of St. Peter's (1696),³¹³

³¹⁰ OECHSLIN, "Vittone e l'architettura," pp. 43-44, note 5.

³¹¹ PICKREL, "L'élan de la musique," pp. 237-254, observes a stylistic parallel between the exuberant architecture of the Santa Cecilia Chapel and the innovative music of Arcangelo Corelli promoted by the patrons of the chapel, the Congregazione dei Musici, and argues that Gherardi's design was deliberately chosen to express and give support to the new music.

³¹² On Pozzo's Chapel of the Collegio Inglese, see B. KERBER, "Ein Kirchen Projekt des Andrea Pozzo als Vorstufe vor Weltenburg," *Architectura* II (1972), pp. 34-72. On Pozzo's

and Giuseppe Sardi's Baptistry Chapel in San Lorenzo in Lucina (1721), the lantern of which functions as a large light chamber to increase the apparent height of the chapel interior.³¹⁴ Similarly designed vaults are also found in the chapel vaults in Fischer von Erlach's Karlskirche in Vienna (1715-38).³¹⁵ It is from domes such as these that Vittone would later draw inspiration for his own dome designs.³¹⁶

In Piedmont Juvarra also made use of perforated shells, vertex openings, and light chambers in a series of light and airy vaults designed for the Venaria Reale near Turin (1716-31, never completed), the Carmine in Turin (1732-36), Sant'Andrea at Chieri (1728-33, demolished 1803), as well as his two unexecuted projects for San Raffaele (*ca.* 1724) and the Duomo Nuovo (1728-

project for San Tommaso di Canterbury, see R. BÖSEL, *Jesuitenarchitektur in Italien 1540-1773. Die Baudenkmäler der römischen und der neapolitanischen Ordensprovinz*, 2 vols. (Vienna, 1985), I, pp. 251-255, II, figs. 170-172. See also SMITH, "The Concorso Accademico," pp. 26-45, fig. 2-z; and IDEM., *Architectural Diplomacy*, pp. 78-79, fig. 51, who traces the origin of the open, truncated dome to the domes of François Mansart (e.g., the Bourbon Chapel in Saint-Denis), Louis Le Vau, and Jules Hardouin-Mansart (e.g., the Invalides Chapel) especially as they were popularized in Italy by means of the *Concorso Accademico* of 1677. There is also Pozzo's aisle vaults of the Jesuit University church in Vienna in which a horizontal soffit is perforated by an oculus, the idea of which has been traced to the false perforated ceilings in Borromini's loggia vestibule of the Oratory of the Filippini; see OECHSLIN, "Vittone e l'architettura," p. 75, fig. 24-b.

³¹³ See BRAHAM/HAGER, *Carlo Fontana*, p. 45, no. 37, fig. 11; HAGER, "Un riesame," pp. 264-269, pls. 17-18; IDEM., "Il significato," p. 81, fig. 10; and IDEM., "Dientzenhofer's Cathedral," p. 190.

³¹⁴ OECHSLIN, "Vittone e l'architettura," p. 45, fig. 23-a. See also PORTOGHESI, *Roma Barocca*, p. 532, Drawing Appendix Plate VI, fig. D; and MALLORY, "Architecture of Giuseppe Sardi," pp. 85-87, fig. 4.

³¹⁵ OECHSLIN, "Vittone e l'architettura," p. 78, fig. 27-a. Fischer von Erlach first adopted this type of vault in his design for the high altar in the church at Strassengel; see WITTKOWER, *Art and Architecture*, p. 419, note 45 on p. 564. In addition, Fischer von Erlach designed an openwork dome for the Collegiate Church in Salzburg (1696-1707) with five circular openings that perforate the haunch and crown. A similar dome, this one with 17 apertures perforating the haunch and crown, rises above the reconstructed cathedral at Fulda, erected by Johann Dientzenhofer between 1704 and 1712 after a design sent from Rome to Fulda by someone associated with the school of Carlo Fontana, either Carlo himself or, as seems more likely, his son Francesco. See HAGER, "Dientzenhofer's Cathedral," p. 216 figs. 137-138.

³¹⁶ OECHSLIN, "Vittone e l'architettura," pp. 43-45, figs. 25-d, 26-c.

30) both in Turin. In these designs Juvarra achieved a striking vertical continuity of structure and space (Figures 4.93-4.96). For example, the side chapels and pseudo-galleries of the Carmine are vertically connected by means of vertex openings in the chapel vaults to form tall vertical tubes of space.³¹⁷ Light streams from the gallery windows through the oval openings of the chapels vaults into the side chapels below, a variation on the idea originally conceived by Bernini for his St. Teresa altar in the Cornaro Chapel.³¹⁸ The same verticality and skeletonization of structure characterizes one of Juvarra's designs for the Duomo Nuovo in Turin.³¹⁹

Outside of Piedmont, in other regions of northern Italy, particularly in Bologna, there developed over the course of the late seventeenth and early eighteenth centuries a strikingly scenographic version of the perforated shell, one closely allied with the art of *quadratura*. It was a version particularly well suited to palace staircase halls that, like Borromini's loggia vestibule at the Oratory of the Filippini, typically are small in size. Indeed, the ceilings of these staircase halls are broken through, precisely like Borromini's loggia, to generate the illusion of spatial extension, complete with *quadratura* to enhance the scenographic effect.

Such vaults doubtlessly inspired the grand openwork vaults designed by various members of the illustrious Galli Bibiena family, most notably Ferdinando (1657-1743) and his son, Antonio (1700-74). In their capacity as

³¹⁷ POMMER, *Eighteenth-Century*, pp. 85-87. See also HAGER, "Il significato," p. 81, figs. 10-12, who observes that these vertex openings are analogous to, and no doubt were inspired by, the vertex opening in the dome of Fontana's Baptistry Chapel in St. Peter's.

³¹⁸ WITTKOWER, *Art and Architecture*, p. 419, note 45 on p. 564; HATFIELD, "Relationship," pp. 136-137.

³¹⁹ WITTKOWER, *Art and Architecture*, p. 423.

stage designers and *quadraturisti*, the Galli Bibienas were uniquely suited to exploit the inherent scenographic quality of the perforated, multi-shelled vault.³²⁰ Ferdinando designed several such vaults, including his most celebrated creation, the vault of Sant'Antonio Abate at Parma (1712-60). Its inner shell is perforated with numerous oculi of varying sizes and contours through which the spectator below views an illusionistic fresco painted on the intrados of the outer shell (Figures 3.43-3.44). It is a false canopy, a non-load bearing sheathing whose construction reflects the same principles of design that inform the arts of stage decoration and *quadratura*, although it is unclear how much of the vault as built actually reflects Ferdinando's design.³²¹

Ferdinando conceived the Sant'Antonio Abate vault as a scenographic decoration in its own right, one that, in its transformation into an image of the "Celestial Vault," serves as a stage set for religious spectacle. Unlike stage set decorations made of wood and canvas, however, the inner shell is a masonry structure, but one in which ribs and webbing alike are punctured by the oculi.³²² The tectonic value of the ribs is thereby negated, their structural

³²⁰ Ferdinando and his brother, Francesco Galli Bibiena, were trained as *quadraturisti* by Mauro Aldrovandini and Giacomo Antonio Mannini. They practiced the art of *quadratura* throughout their careers, especially during the early years when they painted frescoes in palaces, country villas, and theaters throughout Emilia and Romagna. It was as a fresco painter that Fernando entered the service of Ranuccio Farnese, duke of Parma, around 1690 for whom he continued to work also as a stage designer and architect for some 20 years. See D.M. KELDER, "Galli Bibiena Family," in Placzek, ed., *Macmillan Encyclopedia of Architects*, II, pp. 149-153, here p. 150.

³²¹ See POMMER, *Eighteenth-Century*, p. 113, note 49 on pp. 126-127. Ferdinando drew up the design while in Parma immediately upon having received the commission in 1711. Several months later he was called away to Vienna where in 1717 he was appointed first Imperial theater architect. Ferdinando's involvement thus was limited to the initial design. The actual construction was undertaken by others over an extended period of time and was not finished until 1760 long after the architect's death. See COMOLI MANDRACCI, "«Cielo» e iconografia," p. 394, note 2.

³²² On the masonry construction of the inner shell, see IBID., p. 396, fig. 9. The shell is mistaken for a wooden structure by KELDER, "Galli Bibiena," in *Macmillan Encyclopedia*, p. 152.

integrity breached by apertures, in contrast to the ribs of Guarini's domes of San Lorenzo and the Sindone, for example, which are solid and whole with their structural utility securely intact.³²³ The space between the two shells, illuminated by clerestory windows concealed from the spectator's view by the inner shell, serves effectively as a large light chamber working "to capture light and to create a luminous cushion of air by which light is indirectly transmitted to the ambient underneath."³²⁴

Sant'Antonio Abate is not a centralized but a longitudinal church comprised of two square groin vaulted bays with wide flat ribs that spring from beveled piers in a manner akin to that of Guarini's Immacolata Concezione in Turin and his project for San Filippo Neri also in Turin.³²⁵ The elaborate light chamber and diaphanous false canopy recall another Guarinian source, namely the double-shelled dome of Guarini's project for San Gaetano at Vicenza.³²⁶ The immediate source of inspiration, however, was Guarini's proposed vault above the *gran salone* of his project for the reconstruction of the Castello at Racconigi (Figure 4.92). Indeed, the salient properties that characterize the Parma vault — the rectangular plan, the diaphanous sham shell, the positioning of a clerestory above the inner shell, the cushion of space between the two shells that serves in effect as a large light chamber, and the strong *chiaroscuro* — are precisely the same ones that characterize Guarini's proposed Racconigi vault. Finally, the perforated inner shell serves at Parma,

³²³ POMMER, *Eighteenth-Century*, p. 113.

³²⁴ COMOLI MANDRACCI, "«Cielo» e iconografia," p. 397.

³²⁵ MATTEUCCI, *L'architettura del Settecento*, p. 89; COMOLI MANDRACCI, "«Cielo» e iconografia," p. 396.

³²⁶ IBID., p. 397.

just as it does in Guarini's projected vault at Racconigi, to blur the spatial definition of the outer bounds of the building and thereby confound the spectator's capacity to gauge the true height of the interior hall.

Ferdinando's gifted son, Antonio Galli Bibiena, also designed perforated, double-shelled vaults: one for the Chapel of the Santissimo Sacramento in Santa Maria dell'Assunta at Sabbioneta (1768),³²⁷ and another, a more elaborate version of the first, for the parish church of Sant'Antonio Abate at Villa Pasquali near Sabbioneta (1765-84).³²⁸ The former vault has been transformed into a true latticework of ribs and tracery (Figure 3.45), more diaphanous than his father's earlier vault at Parma and closer in spirit to Guarini's cage-like interlaced ribbed domes. The latter vault is actually a hemispherical dome, the inner shell of which is likewise a lacework of masonry ribs that, together with similarly designed, abutting semi-domes, produces a striking "diaphanous transparency" (Figures 3.46-3.47).³²⁹ Antonio's dome and semi-domes at Villa Pasquali are comparable in their filigree to Gothic bar tracery, forming in effect a fine lattice through which the

³²⁷ This vault is erroneously attributed to Ferdinando by PUERARI, *Sabbioneta*, fig. 22, followed by WITTKOWER, *Art and Architecture*, p. 371, note 5 on p. 554; POMMER, *Eighteenth-Century*, p. 113, note 49 on pp. 126-127; and QUAGLINO PALMUCCI, "Bernard-Antoine Vittone," p. 390. See also COMOLI MANDRACCI, "«Cielo» e iconografia," p. 397, note 1, who mistakes Antonio's vault in the Assunta for one in the Incoronata, a church also in Sabbioneta.

³²⁸ The original church at Villa Pasquali had been constructed after a design drawn up sometime around 1734 by one of the Galli Bibienas, perhaps by Ferdinando himself; see POMMER, *Eighteenth-Century*, p. 113, note 49 on pp. 126-127. In 1766 the original structure suffered a spectacular collapse and was rebuilt according to Antonio's design by the master mason, Crispino Milanese. See excerpts of documents conserved in the parish archives and published by DE BERNARDI, "La chiesa di Villa Pasquali," p. 51. The design of the present fabric is thus undoubtedly the work of Antonio Galli Bibiena. Another perforated shell of the type fashioned by the Galli Bibienas, this one by Francesco Ambrogio Petrocchi, also appears in the Romagna, in the presbytery vault of the Carmine at Lugo (1748-56); see A. EMILIANI, ed., *Questa Romagna: Storia, costumi e tradizioni*, 2 vols. (Bologna, 1968), II, p. 70 (right figure); and OECHSLIN, "Vittone e l'architettura," pp. 39-40, note 4.

³²⁹ MATTEUCCI, *L'architettura del Settecento*, p. 281. On the masonry construction of the dome, see DE BERNARDI, "La chiesa di Villa Pasquali," pp. 53, 55.

spectator below views illusionistic frescoes of angels and saints painted on the continuous surface of the outer shell. The inner shells of the dome and semi-domes are backlighting by light entering through small windows in the outer shells. In the dome, the eight ribs of the inner shell are positioned directly before the windows of the outer shell, effectively blocking them from the view of the spectator below. The luminous rays entering the windows strike the backs of the ribs and reflect themselves onto the intrados of the outer shell. The semi-domes are illuminated in a similarly modulated and diffused manner. Light enters through windows positioned behind the ribs of the inner shells, with the ribs again concealing the windows from the spectator's view and diffusing the light onto the intrados of the outer shells.³³⁰ In short, the double-shelled dome and semi-domes of Antonio's church at Villa Pasquali function as intricate light chambers set aglow by a backlighting that serves to blur the bounds of the domical structure and thereby produce an optical dilation of space.³³¹

Vittone's Designs

It was in the openwork architecture of Bernardo Vittone that the perforated shell reached its consummate form. Vittone drew upon and synthesized a variety of sources, including Borromini and Bernini's concealed windows and light chambers, Guarini's superimposed multi-shelled vaults, Pozzo and Gherardi's truncated domes with vertex openings, Juvarrá's

³³⁰ IBID., pp. 52, 56, figs. 1, 10.

³³¹ IBID., p. 55.

vertical continuity and skeletonization of structure, and Ferdinando Galli Bibiena's perforated false ceilings and illusionistic frescoes to create novel vaults of persuasive force.³³² Vittone also appears to have been familiar with, and to have drawn lessons from, the scenographic staircase halls of Bolognese palaces as indicated by his descriptions and illustrations in both of his architectural treatises of one such palace, the Palazzo Ranuzzi at Bologna (today the Palazzo di Giustizia).³³³

Vittone had experimented with both light chambers and vertex openings very early in his practice, even before departing for Rome in 1731. For example, in his preliminary designs for Santa Maria della Neve at Pecetto (1730-32), recorded in the Vandone Collection in the Museo Civico in Turin, he positioned three light chambers above the side chapels to either side of the nave (Figure 1.2) in anticipation of Juvarra's light chambers positioned above the galleries of the Carmine (1732-36).³³⁴

³³² OECHSLIN, "Vittone e l'architettura," p. 39, note 4, p. 40.

³³³ VITTORE, *Istruzioni elementari*, p. 455, pl. 79, no. 12: "...ed in Bologna quella del Ranuzzi..."; IDEM., *Istruzioni diverse*, pp. 150-151, pl. 18: "...la ragguardevole principal Scala del Palazzo Ranuzzi in Bologna... Disposta vedesi questa a tre rami in capo, ed a parte sinistra del Porticato, che esiste sull' ingresso del gran Cortile del Palazzo, due de' quali rami presentano uno per parte la salita loro verso esso Porticato, e rigirandosi con eguale maniera in forma d'arco portano ad un stesso ripiano, a cui succede tramezzo a' predetti il terzo ramo, che va a sboccare al piano d'una nobile e spaziosa Galleria sopra il detto Porticato, libero lasciando sotto di se, e del ripiano anzidetto, e tra li due primi rami il passaggio ai cocchi per portarsi in un Cortile privato di detto Palazzo, dopo che da essi sono a piè della Scala, per salire agli Appartamenti, smontate le Persone, che si portano ad esso." According to OECHSLIN, "Vittone e l'architettura," p. 51, note 1, Vittone's illustration of the Palazzo Ranuzzi in both of his treatises, and his detailed description of the palace in *Istruzioni diverse*, is a strong indication that Vittone had contact with Bologna, a contact that probably took place in 1733 on the occasion of his return from Rome to Turin. See also OLIVERO, *Le opere*, p. 68; and OECHSLIN, "Vittone e l'architettura," pp. 42-43, note 1 continued on p. 43. On the staircase in the Palazzo Ranuzzi, see *Bologna – Centro Storico*, p. 144.

³³⁴ The connection between the designs for the parish church at Pecetto and the Carmine is discussed by POMMER, *Eighteenth-Century*, p. 87, note 39 on p. 95. See also L. TAMBURINI, "Le cappelle della Chiesa del Carmine in Torino alla luce di due disegni inediti," in *Studi juvarriani*, pp. 357-366.

Vittone continued to experiment with light chambers in his project for an ideal church that he describes and illustrates in *Istruzioni diverse* (Figure 4.97).³³⁵ The project is undated but most likely it was drawn up during the early to mid-1730s while Vittone was still a student at the Accademia di San Luca or sometime shortly thereafter. It is a Greek cross surmounted by a large central dome, with each of the four arms terminated by an apse. Between the central dome and the apsidal terminations of the arms there are intermediate bays above which tall shafts of space rise to the height of the main drum where, through openings in the walls of the drum, they are put into spatial communication with the interior of the dome.³³⁶ These shafts of space rise uninterruptedly from the floor through openings in the crowns of the lower storey vaults to the upper storey vaults in a manner that again recalls the side chapels and galleries of Juvarra's Carmine.³³⁷ Vittone himself boasts that the church would not fail in his estimation to give satisfaction and pleasure to the spectator whose eye would be able to range easily across the breadth and varied spaces of the whole structure.³³⁸ It is for these reasons, to create a sense

³³⁵ VITTONI, *Istruzioni diverse*, pp. 187-188, pls. 82-83. See also CAVALLARI MURAT, "L'architettura sacra," pp. 42-43; PORTOGHESI, *Bernardo Vittone*, pp. 121-123, 233, figs. XXX-XXXI; OECHSLIN, "Vittone e l'architettura," p. 77, fig. 26-c; and NORBERG-SCHULZ, "Centralità ed estensione," figs. 7-8.

³³⁶ VITTONI, *Istruzioni diverse*, p. 188: "La gran Cupola di mezzo resta accompagnata da quattro altre Cupole minori in forma ovale, le quali nella loro elevazione non ne oltrepassano l'altezza del Tamburo, per cui comunicano colla maggiore..."

³³⁷ See OECHSLIN, "Vittone e l'architettura," p. 46, note 1. The tall shafts of space of Vittone's ideal church project also recall those of Carlo Fontana's projects for the Baptistry Chapel of St. Peter's and a staircase conserved today in the Library of Art in Berlin; see HAGER, "Il significato," figs. 4, 10.

³³⁸ VITTONI, *Istruzioni diverse*, p. 188: "...cosa, che per l'ampiezza, e varietà dello spazio, che all'occhio presenta, e per il comodo, che a lui dà di vagamente spaziare per esse, massimamente anche pure per la disposizione, e per gli ornamenti, di cui vanno dotate, non può a mio intendere, che riuscire ad esso di tutta sua e soddisfazione, e compiacimento." See

of spatial expansion and to satisfy and delight the spectator's eye, that Vittone proposed to perforate the mural envelope of the edifice.³³⁹ Vittone envisioned a lightweight dome, one that was to have been constructed of brick in order to reduce its weight, but with reinforcements of stone positioned at various intervals to counter the thrust of the bearing arches.³⁴⁰

Vittone also designed perforated shells and light chambers for the Sanctuary of the Visitazione at Vallinotto (1738-39; Figures 4.39-4.43). The dome is comprised of three shells, superimposed one atop the other and backlighted to create a telescopic effect. In contrast to the dark lower zone of the church, the dome is bathed in a diffused light that makes it appear to float. Light enters the church from above and is channeled through concealed windows, light chambers, and vertex openings of the dome and the semi-domes of the side chapels. The many surfaces of the dome act as a filter through which light is reflected and diffused to produce gradations of luminosity in the church interior.³⁴¹

also PORTOGHESI, *Bernardo Vittone*, pp. 121-122, who discusses Vittone's use of perspectival diminutions in the pentagonal shafts.

³³⁹ VITTONI, *Istruzioni diverse*, p. 188: "...che dell' Opera stessa, che a dimostrare venendosi all' occhio maggiormente massiccia, e pesante, e d'ostacolo riuscendogli al potersi ampiamente diffondere, privo lo lascierebbe di quella soddisfazione, che egli prova allorquando maggiore trova lo spazio a dilatarsi, e a godere della varietà degli oggetti: e minori incontra, e men frequenti gli ostacoli, che dar gliene possono impedimento." See also PORTOGHESI, "Metodo e poesia," p. 107.

³⁴⁰ VITTONI, *Istruzioni diverse*, p. 188: "Leggeri forse pareranno a più d'uno i muri, de' quali composto va il corpo di questa Chiesa, e massimamente quelli, che ne formano la Cupola. D'uopo pertanto mi è qui avvertire esser mio pensiero, che vi s'impieghi in parte la pietra viva di taglio, formandone legami da inserirsi a' debiti intervalli, e ne' luoghi loro opportuni nella struttura di sotto; e ciò per rendere la struttura medesima idonea a regger il peso de' materiali, e la spinta degli Archi, che sopra vi s'appoggiano, senza averla ad ingrossare indebitamente con pregiudicio inevitabile non tanto delle parti inferiori, che sorregger la debbono atteso il maggior peso, che vi si addossa..."

³⁴¹ WITTKOWER, *Art and Architecture*, p. 427. The introduction of diffused light to illuminate the domed structure owes much to the example of San Lorenzo, among other sources; see MILLON, "Vittone," *Architectural Review*, p. 98.

The innermost shell of the Vallinotto dome is an open lattice of intersecting ribs derived from Guarini's domes. The intermediate and outermost shells, by contrast, are solid, closed structures with a smooth continuous surface covered in fresco and interrupted by only a few apertures. The intermediate shell is perforated at its vertex by a wide oculus. It does not bear upon an annular cornice but directly upon the six piers and six primary arches to produce a marked sense of levity and vertical lift. Six smaller arches are inserted immediately above the keystones of the primary arches to create "a lofty system of arches with which the ribbed vaulting forms a logical unity."³⁴² These are the only apertures that puncture the intermediate shell which otherwise is entirely closed and covered in fresco. This is the final version of the dome as it was built and illustrated in *Istruzioni diverse* (Figure 4.40). However, in an earlier version of the design as recorded on plate 59 of "L'architettura civile" and on two additional sheets in which the section of the dome is depicted without its fresco, one sheet conserved in the Vandone Collection in the Museo Civico in Turin (Figure 4.41) and the other sheet in the Biblioteca Reale in Turin, the intermediate shell is shown punctured by still another set of apertures, small round windows inserted into the haunch, that contribute to a more open character than that of the dome as built.³⁴³ These

³⁴² WITTKOWER, *Art and Architecture*, p. 427. The insertion of small apertures immediately above the keystones of the main arches was inspired largely by the example of Guarini's architecture. The motif appears at San Lorenzo, for example, in the form of oculi inserted into the annular cornice at points immediately above the crossing arches, and into the walls immediately above the keystones and lateral lintels of the corner serlianas of the central space. The motif also occurs at the Collegio dei Nobili, in the form of small openings inserted immediately above the broken pediments, and in the Palazzo Carignano, in the form of apertures of various sizes and contours inserted immediately above the keystones of the arched windows and portals of the façade.

³⁴³ CAVALLARI MURAT, "Alcune architetture," pp. 6-7, figs. 7-8; IDEM., "L'architettura sacra," pp. 37-38, figs. 5-6; IDEM., "Aggiornamento," pp. 537-538, fig. 58; CARBONERI, "Appunti," pp. 62-63, figs. 10-11.

apertures, jettisoned in the final version of the dome, reflect once again Guarini's influence since they correspond precisely to the small square windows that punctuate the haunch of the inner shell of Guarini's dome for San Gaetano at Vicenza.³⁴⁴ Moreover, in the earlier version of Vittone's design, the secondary arches inserted above the keystones of the main arches are considerably larger than those in the final built version, with dimensions approaching those of the main arches themselves, a feature that contributes to the more open character of the earlier dome design.

The outermost shell of Vittone's dome, as originally designed and constructed, is a solid continuous structure, punctured only at its vertex by an oculus (upon which the lantern rests) and at its haunch by dormer windows that are effectively concealed from the sight of the spectator below by the interposition of the intermediate shell. Light passes through the external windows, strikes the extrados of the intermediate shell, and is reflected onto the intrados of the outermost shell to produce a diffused glow. Light also passes through the light chambers and vertex openings of the semi-domes of the side chapels, an arrangement that closely resembles the side chapels of the Carmine, except that in Vittone's church it is adapted to the requirements of a centralized structure.³⁴⁵ As seen from the floor below, the outermost shell is brighter than the intermediate one, a contrast in illumination that, in

³⁴⁴ Turin, Museo Civico, Vandone Collection. See CAVALLARI MURAT, "L'architettura sacra," p. 38, fig. 6.

³⁴⁵ See PORTOGHESI, *Bernardo Vittone*, p. 97, who observes that the lighting effects of the Carmine are indispensable precedents for those of the Visitazione. On the connection between the Visitazione and the Carmine, see also WITKOWER, *Art and Architecture*, p. 427; MILLON, "Vittone," *Architectural Review*, p. 101; POMMER, *Eighteenth-Century*, p. 111; PASSANTI, "Per Bernardo Vittone," p. 6; and NORBERG-SCHULZ, *Late Baroque*, p. 178. Vittone is known to have made a copy of Juvarra's project for the façade of the Carmine (Paris, Musée des Arts Décoratifs, II, no. 178); see POMMER, *Eighteenth-Century*, p. 108, note 11 on pp. 121-122; OECHSLIN, "Vittone e l'architettura," p. 45; and GIUDICI/MEMOLI, *La architettura*, p. 280.

combination with the telescopic superimposition of shells, serves optically to extend the height of the diminutive church.³⁴⁶

The illusionistic extension in height is produced by the same scenographic means — backlighting, concealed sources of light, perspectival diminutions, and telescopic stacking of shells — as those that illusionistically extend depth in a stage set, with the shells of the dome functioning very much like scenographic wings. Vittone reinforced the scenographic effect by means of gilt stucco rays emanating from the edges of the vertex openings of the apsidal semi-vaults. These rays of materialized light, modeled after similar rays in Bernini's Raimondi and Cornaro Chapels, serve to connect the zone of the perforated vault above with that of the spectator's space below, much as the stucco rays of contemporary sacred theater served to connect the zone of the church's presbytery with that of the nave.³⁴⁷

In its stacked multiple shells, the dome of the Visitazione bears a close resemblance to Gherardi's domes in the Avila and Santa Cecilia Chapels (Figures 3.35-3.36).³⁴⁸ But its immediate source of inspiration, as discussed above, was the dome of Guarini's unexecuted project for San Gaetano at Vicenza (Figure 4.91). In the Visitazione, as in the San Gaetano project, the stacking of multiple shells (the innermost one more open than the outermost one) leaves the eye without a reference to measure their distance and thus succeeds in confounding the spectator's capacity to gauge the spatial limits of

³⁴⁶ WITTKOWER, "Vittone's Domes," p. 214.

³⁴⁷ IDEM., *Art and Architecture*, p. 427; PORTOGHESI, *Bernardo Vittone*, p. 97.

³⁴⁸ On Vittone's debt to Gherardi's architecture, see the discussion in IDEM., *Roma Barocca*, p. 304.

the dome, producing thereby an illusion of spatial dilation.³⁴⁹ San Gaetano also served as the model for the positioning and arrangement of dormer windows on the exterior shell such that they are concealed from the eyes of the spectator below by the interposition of the intermediate shell.³⁵⁰ Vittone copied Guarini's scheme precisely, to which he added a third shell or lattice of free-spanning interlaced ribs. Guarini himself never designed a triple-shelled dome, just as he never conceived the network of interlaced ribs as a free-spanning lattice that bears nothing but its own weight, and so the Vallinotto dome could never be mistaken for one of Guarini's own domes. Still, the general dependence upon San Gaetano is unmistakable, even more so since Vittone's original version of the design, as recorded on sheets conserved in both the Museo Civico and the Biblioteca Reale in Turin, called for windows to be inserted into the haunch of the intermediate shell in precisely the same manner as they are inserted into the inner shell of Guarini's design, the only difference being that Vittone's windows are round and Guarini's square.

The Visitazione also manifests a strong affinity with the scenographic churches designed by members of the Galli Bibiena family, in particular Ferdinando's Sant'Antonio Abate at Parma whose double-shelled vault incorporates a perforated, false canopy. The affinity extends to the illusionistic fresco painted on the intrados of Galli Bibiena's outer shell and made visible to the spectator below through perforations in the inner shell. There are also differences. The inner shell of Galli Bibiena's vault remains very much a shell, however profusely it may be riddled with perforations,

³⁴⁹ PORTOGHESI, "Metodo e poesia," p. 101; IDEM., *Bernardo Vittone*, p. 97.

³⁵⁰ WITTKOWER, *Art and Architecture*, p. 427.

whereas the inner shell of Vittone's dome is a true lattice. Furthermore, the ribs of Galli Bibiena's shell are themselves perforated, whereas those of Vittone's shell are not. Thus while both structures are masonry constructions, they are treated differently by their architects. Galli Bibiena, a scenographer and painter of *quadratura* by training, did not distinguish between the webbing and the ribs, but perforated both alike, weaving them into a single fabric in a manner that emphasizes the decorative over the structural property of the shell. Vittone, by contrast, an engineer by training, drew a clear distinction between the webbing and the ribs, entirely eliminating the one and leaving the other fully intact in a manner that respects the structural integrity of the ribbed frame. Notwithstanding the differences between the two churches, the similarities between them are striking and suggest that Vittone conceived his dome, just as Galli Bibiena conceived his vault, as a type of stage set. Vittone's dome is even closer in resemblance to Antonio Galli Bibiena's lattice domes in Sant'Antonio Abate at Villa Pasquali (Figure 3.46) and the Chapel of the Santissimo Sacramento in the Assunta at Sabbioneta (Figure 3.45),³⁵¹ both of which, however, postdate Vittone's dome by some 30 years.

Within a year of completing the Visitazione at Vallinotto Vittone designed San Bernardino at Chieri (1740-44), another openwork structure complete with vertex openings and light chambers (Figures 4.99-4.100). Vittone inherited the commission from an earlier architect whose construction, primarily the dome and upper walls, had suffered collapse.³⁵² Only the

³⁵¹ POMMER, *Eighteenth-Century*, p. 113, note 49 on p. 127.

³⁵² The original dome of the church collapsed in 1740 as it was undergoing construction by the master mason, Bernardino Leone, after a design by the Luganese architect, Bernardino Quadro. Blame was assigned to Leone and, in order to avoid costly litigation, both Vittone and Gaspare Brea, a lawyer who at the time was also serving as first president of the Senate in Turin, were brought in to adjudicate the matter. Leone was assessed 2000 lire for damages

foundations and the walls of the choir and the façade were left standing.³⁵³ Required to build upon the ruins of the previously existing structure that had been laid out in the form of a traditional Greek cross, Vittone made the most of its limitations. First he reinforced the lower walls by adding new pillars and pilasters.³⁵⁴ Then he erected a lightweight dome above the square crossing, an octagonal cloister vault that he describes as being very different from the usual style.³⁵⁵ The dome is supported by eight piers of the drum. The dome is not itself perforated, except for the oculus at the crown, but closed. It is the drum that is open, a skeletal pavilion of piers that conveys a marked sense of levity reinforced by the perforated pendentives. To the eight piers of the drum proper Vittone added four additional piers, one at each of the corners of the crossing to fill out a square, for a total of twelve piers to the drum. These corner piers are capped by their own triangular vault segments that serve to buttress the main dome. The drum is thus characterized by an intersection of two structures — an inner octagon and an outer quadrangle — the octagon delimited by the eight piers that support the ribs of the dome, and the quadrangle by the four piers positioned at the corners of the crossing.³⁵⁶ It

incurred by the collapsed dome and ordered to pay it over a period of four years to the Confraternity that owned the church. Leone was also obligated to rebuild a new dome, this one after a design prepared by Vittone, and to complete it within the same four years time. See A. BOSIO, *Memorie storico religiose e di belle arti del duomo e delle altre chiese di Chieri con alcune disegni* (Turin, 1878), a source I was unable to consult, but see also OLIVERO, *Le opere*, p. 80; and QUAGLINO PALMUCCI, "Bernard-Antoine Vittone," p. 387, note 1 on p. 399.

³⁵³ VITTONI, *Istruzioni diverse*, p. 182: "Fu questa concepita sulle rovine della Chiesa, che già esisteva in forma quasi d'ottangolo irregolare, e di cui rimasero in piedi soltanto le muraglie del Coro, e della Facciata, salve però, ed illese intieramente le fondamenta."

³⁵⁴ IBID., p. 182: "Ad esse pertanto dovei adattarmi nella produzione di quest' idea; il che feci coll' aggiunta di Lasenamenti, e nuovi Pilastri, sendomi così ella riuscita come si vede."

³⁵⁵ IBID., p. 182: "La Cupola, che sopra vi è eretta, e cui stimai tenere leggera, non poco scostasi nella sua forma dallo stile comune."

³⁵⁶ PORTOGHESI, "Metodo e poesia," pp. 103, 106; IDEM., *Bernardo Vittone*, p. 106.

is a geometrical scheme that owes much to the example of Plantery's atrium vaults, in which the corners are likewise treated in an ambiguous manner.³⁵⁷

The drum is surrounded on all sides by light chambers. The primary light chambers, large rectangular boxes, are positioned on the cardinal axes above each arm of the Greek cross. They channel light down to the vertex openings of the semi-domes that cap the chapels and entrance. The secondary light chambers, small triangular wedges, are positioned on the diagonal axes above the corners of the crossing. They channel light down to the perforated pendentives which themselves function as miniature light boxes.³⁵⁸ Thus the drum is not an inert wall, but a vibrant membrane that generates a strong sense of spatial depth.³⁵⁹ On the exterior, the dome and light chambers present themselves as an undulating array of braced cells constituting an esthetic and structural novelty that stands in sharp contrast, as Cavallari Murat observes, to the Michelangelesque tradition.³⁶⁰

Vittone perforated the pendentives and the semi-domes of the chapels and entrance. He did this, he tells us, so that light from the dome might be diffused downward, and the church brightened in a livelier manner.³⁶¹ This bears repeating since it is Vittone's expressly stated intent not only to illuminate the church interior, but also to do so in a dynamic and vivid way. Light passes through the apertures to produce a striking luminous effect

³⁵⁷ IDEM., "Metodo e poesia," p. 103.

³⁵⁸ IDEM., *Bernardo Vittone*, p. 106.

³⁵⁹ IBID., p. 105.

³⁶⁰ CAVALLARI MURAT, "L'architettura sacra," p. 44, note 20.

³⁶¹ VITTORE, *Istruzioni diverse*, p. 182: "Lo stesso è delle Vele, e delle Volte delle Cappelle, dell' Antipresbiterio, e dell' Ingresso, le quali tutte restano aperte, così che giù diffondendosi per esse il lume della Cupola, passa a rischiarare più vivamente la Chiesa."

reinforced by the addition of protruding stucco rays of a type used in the Sanctuary at Vallinotto and ultimately derived from the ones at Bernini's Cornaro Chapel. The upper level of San Bernardino is thus riddled with holes giving the appearance of a precarious ruin, an evocation, witting or not, of the ruined state that had befallen the original structure. The upper level appears to the spectator below as though it were hollowed out and lightened by the "sculptor's drill" through which the flow of light is given free course.³⁶² The many perforations produce a diffuse and lively illumination that negates the sense of closure and visually amplifies the interior space. The porous superstructure appears to be lighter in weight than a traditional one, giving the illusion that the central dome hovers in space.³⁶³

The open character of San Bernardino is underscored by the two superimposed arches that terminate the internal arms of the Greek cross. The lower of the two is in effect a free-spanning arch that supports nothing but its own weight. It is, as we have seen, a motif that was favored by Juvarra, and one that is especially prominent in the side chapels and pseudo-galleries of the Carmine. But in this case Vittone's arches more closely resemble the version devised by Carlo Francesco Bizzaccheri (1655-1721) for the access corridor of the Convent of Santa Maria Maddalena in Rome (1680-84).³⁶⁴ Vittone would, within a year's time of completing San Bernardo, employ similar double

³⁶² PORTOGHESI, *Bernardo Vittone*, p. 104.

³⁶³ WITTKOWER, "Vittone's Domes," p. 220.

³⁶⁴ Bizzaccheri was yet another academician and student of Carlo Fontana. He taught at the Accademia di San Luca in 1699 and again from 1701 through 1703; see HAGER, "Introduction," in *Architectural Fantasy*, p. 4. On Bizzaccheri, see also N.A. MALLORY and J.L. VARRIANO, "Carlo Francesco Bizzaccheri (1655-1721)," *Journal of the Society of Architectural Historians* XXXIII:1 (March 1974), pp. 27-47, esp. p. 29, fig. 2; MALLORY, *Roman Rococo*, pp. 31-52; and IDEM., "Bizzaccheri, Carlo," in Placzek, ed., *Macmillan Encyclopedia of Architects*, I, pp. 212-213.

arches in his designs for the Cappella del Cipresso at Chieri (1745) and the Cappella del Cardinale at Moncalieri (1745).³⁶⁵

In his design for San Bernardino at Chieri Vittone drew upon Juvaresque and Guarinesque sources. From Juvarra he derived the idea for the perforated semi-domes above the arms of the Greek cross.³⁶⁶ From Guarini he derived the ideas for the skeletal drum and the perforated pendentive,³⁶⁷ which serve the same purpose as they do in Guarini's churches: to impart a sense of levity to the dome, promote the flow of light, to dissolve the fixed boundaries of the vaulted membrane, and to illusionistically amplify the interior space.

While San Bernardino was still undergoing construction, Vittone began work on his acclaimed masterwork, Santa Chiara at Bra (1742-48), in which he combined the motifs of the perforated shell, the vertex opening, the light chamber, and the concealed window to achieve a particularly striking illusionistic effect, bringing to fruition the themes of his early architecture (Figures 4.101-4.106).³⁶⁸ It is one of four churches by Vittone to have been commissioned by the Clarissan nuns, the same order, it will be recalled, to which three of his step-sisters belonged, and the same order for which several

³⁶⁵ On the Cappella del Cipresso at Chieri, see G. GIORDANO, "Un'architettura per incontri sereni e convenzionali: La villa 'Il Cipresso' a Chieri," *Bollettino della Società Piemontese di Archeologia e Belle Arti* n.s. XLII (1988), pp. 317-329. On the Cappella del Cardinale at Moncalieri, see G. CHEVALLEY, "La villa del Cardinale," *Bollettino della Società Piemontese di Archeologia e Belle Arti* n.s. II:1-4 (1948), pp. 91-98.

³⁶⁶ OECHSLIN, "Vittone e l'architettura," pp. 45-46, figs. 15-a, 15-b, 27-d.

³⁶⁷ POMMER, *Eighteenth-Century*, p. 114.

³⁶⁸ On Santa Chiara at Bra, see especially L. FRANSONI, *Costituzioni delle reverende monache dal monistero di Santa Chiara della città di Bra* (Turin, 1834), a source I was unable to consult; and P. PORTOGHESI, "La chiesa di Santa Chiara a Bra nell'opera di Bernardo Antonio Vittone," *Quaderni dell'Istituto di Storia dell'Architettura* 54 (1962), pp. 1-22.

decades earlier his uncle, Gian Giacomo Plantery, had renovated the convent at Bra.

Vittone designed the church with an eye towards providing for sufficient lighting and a variety of views to be enjoyed throughout the interior. He writes in *Istruzioni diverse* that the interior of the church is two stories tall, with a gallery located above the chapels and main entrance and accessible to the nuns by means of passages existing behind the pillars whence the nuns enjoy a view of every part of the church.³⁶⁹ The dome is comprised of two shells, an inner and an outer one, with four large openings inserted into the webbing of the inner shell in such a manner that, with the aid of light introduced through hidden windows and openings in the gallery vaults, a view of the frescoes painted on the outer shell might be presented to spectators standing in the church below.³⁷⁰ The perforations of the inner shell serve to make a heavy masonry structure appear, in the words of Portoghesi, to have all “the lightness of a sail raised by the wind.”³⁷¹

The effect of lightness and airiness is enhanced by the use of pastel colors — light grays, reds, and greens — similar to those used at Vallinotto and ultimately drawn from the palette of bright and light colors favored by

³⁶⁹ VITTONI, *Istruzioni diverse*, pp. 184-185: “Elle è, come vedesi, al di dentro a due Ordine nella sua elevazione, con Tribune al di sopra delle Cappelle, e della Porta; alle quali possono le dette MM. portarsi per mezzo de’ Passaggj, che formati vi si sono al di dietro de’ Pilastri; e godere per ogni parte della vista della Chiesa...”

³⁷⁰ IBID., p. 185: “La Volta è doppia, e per quattro grandi aperture, che formate sonosi ne’ quattro principali campi dell’ inferiore alla vista presentansi di chi sta in Chiesa le Pitture esistenti nella Volta superiore, coll’ ajuto però del lume, che loro prestano gli occhj a lucello, che vi sono all’ intorno, e delle aperture, che esistono nelle Volte delle suddette Tribune.”

³⁷¹ PORTOGHESI, “La chiesa di Santa Chiara,” p. 22: “...la leggerezza di una vela sollevata dal vento...” See also IDEM., “Metodo e poesia,” p. 104: “...facendola sembrare non vela gonfiata dal vorticoso moto dell’aria sottostante.”

Juvarra instead of the dark and heavy colors favored by Guarini.³⁷² The lower zone of the church is relatively dark, and even darker today as many of the windows have been walled up.³⁷³ The upper zone is bright, the light reflected and diffused throughout.³⁷⁴ The result is a scenographic gradation in illumination from a dark zone below to a luminous one above, similar in this respect to stage sets in which the same gradation in illumination, from darkness to brightness, proceeds from front of the set to back.

The plan of the church is a modified Greek cross comprised of a circular core with four lobed apses aligned on the cardinal axes (Figure 4.102).³⁷⁵ Still,

³⁷² On the contrasting palettes of color favored by Vittone and Guarini, see CAVALLARI MURAT, "Aggiornamento," p. 529.

³⁷³ More than half the windows, most of them in the lower zone of the building, have been walled up. The interior of the lower zone is thus much darker than it would have been had the windows been left open as originally designed, a darkness that contrasts with the brilliantly illuminated upper zone. In other words, the blocking of the windows contributes much to the gradation of luminosity that prevails in the interior. See PORTOGHESI, "La chiesa di Santa Chiara," p. 6; and IDEM., *Bernardo Vittone*, p. 115, who suggests that it was Vittone himself who blocked up the windows, and that he intentionally closed them sometime during the course of construction after having empirically determined that the original design was insufficient to create the desired gradation of luminosity. POMMER, *Eighteenth-Century*, p. 271, argues instead that it is unlikely Vittone blocked up the windows, given the clumsy and crude character of the closures and given Vittone's refined and sophisticated eye. For example, one of the lower windows is closed with concrete, and one of the larger windows in the gallery was blocked up with bricks that are crude in comparison with those of the rest of the church. Furthermore, the pattern of closure in the upper tiers is haphazard. Pommer attributes the blocked up windows to someone else as part of a much later intervention that was required to strengthen the long-neglected church and save the cost of maintaining the windows.

³⁷⁴ It was Vittone's wont to diffuse the reflected light evenly throughout his church interiors, in contrast to Bernini and Cortona, for example, whose general practice was to concentrate the reflected light on the center of dramatic import. See MILLON, *Baroque and Rococo*, pp. 11-12, who compares the diffused light in the interior of Santa Chiara at Bra to the concentrated light in the interior of Cortona's Santi Martina e Luca in Rome.

³⁷⁵ OLIVERO, *Le opere*, p. 79, interprets the plan as a Greek cross. Vittone first employed this *parti* in his unexecuted project for the Chapel of Sant'Evasio in the Cathedral of Casale Monferrato (1735); see OECHSLIN, "Vittone e l'architettura," p. 38, note 2; CARBONERI, "Aspetti e problemi," p. 387, fig. 10; and IENI, "Quattro disegni," pp. 6-13, figs. 1-2. Vittone would return to the *parti* during his late practice with his unexecuted project for the Agostiniani at the Borgo Romanisio of Fossano (1761); see BRAYDA, "Opere inedite," pp. 87-88, figs. 66-67; PORTOGHESI, *Bernardo Vittone*, pp. 173, 232; and CANAVESIO, "Vittone a Fossano," pp. 129-137, 141-146.

the circular geometry is so prominent that the church more properly belongs to Vittone's second church type, the *Chiesa a Tempio*, which is round or polygonal in plan (Figure 4.63), than to his third type, the *Chiesa a Croce Greca*, which is cruciform in plan. Three of the apses are given over to chapels and the fourth to the entrance. These apses are semi-circular in plan. This is the original design as illustrated in *Istruzioni diverse*. In the constructed version the apses are more ovoid in shape, compressed and flattened to fit the corner site.³⁷⁶ The plan is determined as much by the geometry of the square as by that of the circle.³⁷⁷ The four piers that constitute the primary structure of the church occupy the four corners of a square that circumscribes the circular core whose diameter measures about 12 meters.³⁷⁸ The inner faces of the piers are rounded in conformity to the curvature generated by the circumference of the circular core. The four piers are themselves circumscribed by a second square whose side measures some 14 meters. This latter square is circumscribed in turn by a circle whose curvature conforms to that of the inner walls of the chapels and entrance.³⁷⁹ At ground level the plan is simple enough — lobed apses attached to a central rotunda. At the upper level, however, the church

³⁷⁶ POMMER, *Eighteenth-Century*, p. 270.

³⁷⁷ See PORTOGHESI, "La chiesa di Santa Chiara," pp. 8-10, figs. 12-15, who constructs four schematic diagrams of the plan with overlays illustrating the geometric ordering principle behind the design. One diagram is an overlay of rotated squares, the second an overlay of a circle and ovals, and the last two diagrams are each an overlay of a square, a circle, and ovals in combination. The latter three diagrams, but not the first, are also illustrated in IDEM., *Bernardo Vittone*, pp. 110-111, figs. XIX-XXI.

³⁷⁸ Each of the piers is three meters thick as measured on the diagonal; see IDEM., "La chiesa di Santa Chiara," p. 6.

³⁷⁹ POMMER, *Eighteenth-Century*, p. 113, note 48 on p. 126, fig. XX on p. 111, postulates that Vittone circumscribed the circular core with a square whose sides in turn are used to determine the radii of the apses. By absorbing the difference between the geometric and arithmetic systems within the thickness of the piers and the arches, Vittone was able to maintain the measures of the main dimensions in whole units.

takes on a complex spatial order generated by the double-shelled dome, screening columns, concealed windows, light chambers, and unseen but implied spaces.³⁸⁰ Instead of becoming more enclosed and resolved as it rises, Santa Chiara expands and becomes more complex.³⁸¹ Where the lower level of the church is constrained, the upper level is airy, voluminous, and expansive.³⁸²

The dome is comprised of two shells, an inner one supported by the four piers, and an outer one supported by the exterior walls of the side chapels and gallery. The space between the two shells, illuminated by windows concealed from the spectators view, functions in effect as a large light chamber. The inner shell, together with the four piers upon which it bears, forms a skeletal baldachin independent of the outer wall. There are in effect two separate buildings — one set inside the other — that join together at the junctures of the central piers.³⁸³ The separation of the inner baldachin from the outer enclosure is accentuated by a backlighting that, in addition, serves optically to erode further the slender members of the interior baldachin.³⁸⁴ The extent to which Vittone conceived Santa Chiara as a building within a building can be plainly seen in the section published in *Istruzioni diverse*, whereby the inner shell is nestled within the outer one, with the curvatures of

³⁸⁰ MILLON, *Baroque and Rococo*, p. 12.

³⁸¹ IDEM., "Vittone," *Architectural Review*, p. 101. This is the reverse of Borromini's Sant'Ivo alla Sapienza, for example, in which a relatively complex ground plan of alternating convexities and concavities is increasingly simplified as the church rises to the dome until all complexity is resolved and eliminated in the simple form of the circle of the lantern.

³⁸² IDEM., *Baroque and Rococo*, p. 12.

³⁸³ IDEM., "Vittone," *Architectural Review*, p. 101; IDEM., *Baroque and Rococo*, p. 12.

³⁸⁴ IBID., p. 12.

the two shells closely conforming themselves to one another.³⁸⁵ In the final design as built, the outer shell is flattened and pressed down low against the inner shell, which itself is also flattened, the curvatures of the two shells no longer corresponding precisely to one another.³⁸⁶ Still, whether it be in its original or final form, the double layering of structure results in a spatial ambiguity whereby the bounds of the building fabric are not clearly delimited.³⁸⁷

The inner shell is a sheathing of brick that supports nothing but itself.³⁸⁸ It is structurally redundant, but nonetheless it constitutes the “spiritual centre of the building.”³⁸⁹ The inner is pierced by four triangular-lobed-shaped apertures or peepholes, through which the spectator below views figures of St. Clare and St. Francis accompanied by angels in glorious triumph painted on the intrados of the outer shell.³⁹⁰ The apertures of the inner shell are positioned immediately above the keystones of the double-curved arches in a

³⁸⁵ The “building within a building” at Bra is the fruit of Vittone’s earlier experimentation with double layered structures. The double layering of masonry had already occurred in Vittone’s unexecuted project for a parish church “in some very conspicuous place” whereby the inner layer is rendered more porous than the outer one. Vittone continued to develop this theme at Vallinotto and Chieri until he perfected it at Bra.

³⁸⁶ POMMER, *Eighteenth-Century*, p. 270. In effect, then, the outer shell in section, like the apses in plan, is flatter in its constructed form than in its original design as published in Vittone’s treatise.

³⁸⁷ MILLON, *Baroque and Rococo*, p. 12, writes of the “continuous space” generated by the “slender, lithe structural system,” while NORBERG-SCHULZ, *Late Baroque*, p. 167; and IDEM., “Centrality and Extension,” p. 104, writes of the “infinitely distant” and “infinitely extended” space of Vittone’s churches accomplished by means of the skeletal structure.

³⁸⁸ On the brick construction of the Santa Chiara dome, see POMMER, *Eighteenth-Century*, p. 113.

³⁸⁹ WITTKOWER, *Art and Architecture*, p. 428.

³⁹⁰ The figures of St. Clare and St. Francis face one another across the dome, with the figure of St. Clare positioned above the main altar of the church and the one of St. Francis above the entrance.

manner that recalls similar openings above the keystones of the arches supporting the Vallinotto dome. Little is left of the inner shell as it is cut away at its base by the double-curved arches and at its haunch and crown by the many oculi.

The double-shelled dome caps a space that, due to the addition of the gallery, is proportionately tall.³⁹¹ The vertical proportion is accentuated by the continuity of line that extends from the floor to the dome to produce a striking spatial unity, a treatment of space and surface comparable in many respects to that of a Gothic church.³⁹² The continuity of line owes as much to the dissolution of the boundaries between architectural elements that are normally distinct and separate, as to the vertical alignment and

³⁹¹ Santa Chiara functioned as a monastic chapel for the Clarissan nuns until the convent was suppressed in 1866. This explains the presence of the gallery which was reserved solely for use by the nuns and connects to the convent behind.

³⁹² MILLON, "Vittone," *Architectural Review*, p. 101: "The vertical unity allies Vittone's central plan buildings of this period [...] most closely to medieval central plans and not to the Brunelleschi-Bramante tradition." Vittone's medievalism is evident at a very early stage of his practice. Already, in his design of 1730 for the parish church of Santa Maria della Neve at Pecetto, he extended the sills of the clerestory windows into the entablature of the storey below in a manner that calls to mind the pierced and glazed triforia of late Gothic churches; see CAVALLARI MURAT, "Alcune architetture," p. 4, fig. 3; CARBONERI, "Appunti," p. 71, figs. 30-31; IDEM., "Architettura," in *Mostra del Barocco*, I, p. 57, no. 136, pl. 132-a; PORTOGHESI, *Bernardo Vittone*, p. 83, pl. 65; CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 17, no. 8, fig. 4. It is a solution that Vittone also employed in his two unexecuted designs for Santo Stefano dei Padri Servi di Alessandria and Santa Croce at Chieri; see CARBONERI/VIALE, eds., *Bernardo Vittone*, pp. 22, 38, nos. 36, 99, figs. 51, 154. Vittone himself characterized the Gothic as a monstrosity (*Istruzioni elementari*, p. 308): "...del tempo in mostruosità Gottiche...", a bias typical of classically trained architects, and an indication that Vittone's medievalism may not have been a conscious position. On Vittone and the Gothic, see also K. NOEHLES, "I progetti del Vanvitelli e del Vittone per la facciata del Duomo in Milano," in *Arte in Europa* I, pp. 869-874; IDEM., "I vari atteggiamenti nel confronto del gotico nei disegni per la facciata del Duomo di Milano," in M.L. Gatti Perron, ed., *Il Duomo di Milano*, 2 vols. (Milan, 1969), I, pp. 159-167; PEROGALLI, "Nota sull'architettura," p. 885; CARBONERI, "Il dibattito sul gotico," pp. 111-152; FAGIOLO, "L'universo," pp. 127-128; TAVASSI LA GRECA, "Considerazioni," pp. 273-276; M.G. VINARDI, "L'idea del Medioevo nei grandi cantieri sei-settecenteschi di committenza sabauda e vescovile," in Giorgio Simoncini, ed., *Tradizione medievale nell'architettura italiana dal XV al XVIII secolo* (Florence, 1992), pp. 167-186; and R. BINAGHI, "Sensibilità strutturale gotica nell'architettura di Bernardo Antonio Vittone," in G. Simoncini, ed., *Presenze medievali nell'architettura di età moderna e contemporanea* (Milan, 1997), pp. 235-248, 386-387.

superimposition of architectural elements. The horizontal division of zones that distinguishes the interiors of traditional classical architecture, and that is especially prominent in the interiors of Guarini's architecture, is here broken through by an uninterrupted vertical movement that "sweeps through the entire height of the church along the face of the piers right up to the summit of the vault."³⁹³ The spectator's glance is guided along the continuous ascent of piers, on the faces of which are coupled orders (Corinthian pilasters at the lower level superimposed by Corinthian half-columns at the gallery level) that support the coupled ribs of the dome. The vertical sweep of piers and ribs converges on the oculus of the lantern and serves to counteract the general sense of expansiveness and give resolution to the spatial complexity of the dome and its surrounding gallery vaults.

Santa Chiara at Bra is a highly eclectic work that draws upon a great variety of sources and combines them in a comprehensive and innovative synthesis. For example, the general solution of a dome supported by four diagonally disposed piers is derived from a number of precedents, including notably Michelangelo's Sforza Chapel in Santa Maria Maggiore in Rome (*ca.* 1560), Giovanni Antonio De Rossi's Lancellotti Chapel in San Giovanni in Laterano also in Rome (*ca.* 1675), and Luigi Vanvitelli's Church of the Maddalena at Pesaro (1740).³⁹⁴ In the case of the Sforza Chapel, the similarity to Santa Chiara extends to the "billowing" character of the dome. In the case of the Lancellotti Chapel and the Maddalena, the similarity extends to the

³⁹³ WITTKOWER, "Vittone's Domes," p. 217.

³⁹⁴ OECHSLIN, "Vittone e l'architettura," p. 37, figs. 1-a, 1-b, 1-c, 1-d. Vittone would use the same solution again for the Cappella del Cipresso at Chieri (*ca.* 1745) and the Cappella del Cardinale at Moncalieri (*ca.* 1745).

continuity of vertical lines from the orders below to the ribs of the dome above, and to the roundels set in stucco relief in each of the four segments of the dome that, in their relative size and positioning, anticipate precisely the apertures that puncture the inner shell of the Santa Chiara dome.³⁹⁵ Vittone's church was also prefigured by Santi Andrea e Claudio dei Borgognoni in Rome (1728-29) by Antonio Derizet, Vittone's teacher at the Accademia di San Luca. Completed just two years before Vittone arrived in Rome, it features a dome similarly equipped with bundled ribs and perforations on each of the four segments.³⁹⁶ Given the central role played by Derizet in Vittone's education, and the topical currency of Derizet's church at the time, Vittone could not have failed to take a hard, close study of it.

Vittone's solution of the perforated, double-shelled dome is also derived from a number of other precedents in northern Italy, most notably Ferdinando Galli Bibiena's vault of Sant'Antonio Abate at Parma.³⁹⁷ Parma is located in Lombardy not far from Piedmont and Vittone may well have traveled there and seen Galli Bibiena's church.³⁹⁸ Moreover, members of the

³⁹⁵ PORTOGHESI, *Roma Barocca*, p. 302: "...the Lancellotti chapel constitutes the most notable Borrominian echo within Rome in these years and again indicates De Rossi's role as mediator of this tradition for the following generation, a role very broadly exercised in this chapel, as is evidenced, for example, by the indisputable affinity with certain works by Bernardo Vittone."

³⁹⁶ HAGER, "Gian Lorenzo Bernini," pp. 479, 482-483, fig. 11.

³⁹⁷ On the similarity between Galli Bibiena's vault at Parma and Vittone's dome at Bra, see CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 59, no. 146; POMMER, *Eighteenth-Century*, p. 113, note 49 on pp. 126-127; and OECHSLIN, "Vittone e l'architettura," pp. 39-40, note 4 continued on p. 41. The Santa Chiara dome is also closely resembles Antonio Galli Bibiena's perforated domes in Sant'Antonio Abate at Villa Pasquali and in the Chapel of the Santissimo Sacramento in the Assunta at Sabbioneta. However, these latter two domes were each designed and erected many years after Santa Chiara and thus cannot have had any bearing on Vittone's design.

³⁹⁸ Galli Bibiena's church was begun in 1711 but not completed until after 1760, and so it is uncertain at what stage of construction it would have reached by the early 1740s when Vittone designed his church.

Galli Bibiena family were working in Piedmont at the very time when Vittone was drawing up the design for his church at Bra.³⁹⁹ Both Vittone's dome at Bra and Galli Bibiena's vault at Parma are double-shelled structures, the inner shell of which is a sham canopy riddled with perforations through which frescoes painted on the outer shell are revealed to the spectator below. Both Vittone's dome and Galli Bibiena's vault are masonry structures, and both retain, in spite of their many perforations, a coherent surface that makes them "much easier to comprehend" than the true cage-like structures of Guarini's interlaced ribbed domes.⁴⁰⁰ Both are backlit by means of hidden light sources in a manner that recalls contemporary stage set decorations of the type that Galli Bibiena routinely designed for the profane and sacred theaters. Finally, both Vittone's dome and Galli Bibiena's vault owe much to the example of *quadratura* painting, and are in fact translations of *quadratura* into three dimensional architecture.

Still, for all their similarities, Vittone's dome at Bra and Galli Bibiena's vault at Parma differ from one another in significant ways that serve to put into relief Vittone's singular achievement. Vittone's dome is better integrated with the rest of the church than is Galli Bibiena's vault.⁴⁰¹ It spans a centralized space, serving to focus the spectator's gaze in a way that Galli Bibiena's vault, which spans a longitudinal space, does not. Vittone's dome is also more dynamic and fluid than Galli Bibiena's vault.⁴⁰² Finally, as

³⁹⁹ For example, in 1740, just two years before Santa Chiara was begun, one of Ferdinando's sons, Giuseppe Galli Bibiena, was working in Mondovì and making decorations for the play, *Arsace*, in Turin; see CARBONERI, *L'architetto Francesco Gallo*, p. 154; and POMMER, *Eighteenth-Century*, p. 113, note 49 on pp. 126-127.

⁴⁰⁰ IBID., p. 113.

⁴⁰¹ IBID., p. 113.

discussed above, the ribs and webbing are differentiated from one another in Vittone's dome in a way that they are not in Galli Bibiena's vault. For where Galli Bibiena, a scenographer and *quadraturista* by profession, subjected both webbing and ribs alike to perforations, Vittone, an *ingegnere* by profession, subjected only the webbing to perforations.

Vittone's design for Santa Chiara at Bra borrows directly from the architecture of Guarini and Juvarra, fusing aspects of the two in a comprehensive synthesis. Indeed, the defining elements of Vittone's church — the perforated double shell, the skeletal structure, the optical illusionism, and the use of indirect light — all bear witness to the fusion of Guarinesque and Juvaresque elements. The perforated double-shelled dome with hidden light sources owes a particular debt to Guarini's projects for San Gaetano at Vicenza and the *gran salone* of the Castello at Racconigi in which the shells of the vaults are both perforated and doubled in number.⁴⁰³ Likewise, the fresco painted on the smooth intrados of the outer shell of the Santa Chiara dome again owes much to the example of Guarini's project for San Gaetano.

Other features of Santa Chiara, most notably its open attenuated structure and fluid interior space, find a precedent in Juvarra's architecture. For example, the arrangement of a domed baldachin supported by four piers as a structure within a structure is one that is derived from the *salone* of the Palazzina at Stupinigi.⁴⁰⁴ At both Bra and Stupinigi the inner shell of the

⁴⁰² CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 59, no. 146.

⁴⁰³ IDEM., "Guarini ed il Piemonte," p. 356; OECHSLIN, "Vittone e l'architettura," p. 39, note 4, pp. 41-42, note 3.

⁴⁰⁴ On the indebtedness of Santa Chiara to Stupinigi, see MILLON, "Vittone," *Architectural Review*, p. 101; and G. DARDENELLO, "'Open Architecture.' Un disegno per il salone di Stupinigi e una fantasia architettonica di Filippo Juvarra," *Dialoghi di Storia dell'Arte* 4/5 (December 1997), pp. 100-115, here p. 111, note 47 on p. 115, figs. 6, 7, 12.

dome is formally and structurally independent of the outer shell, but where the inner shell of the *salone* vault at Stupinigi is fabricated out of wood and plaster, that of the Santa Chiara dome is constructed of masonry. In constructing his dome then, Vittone faced a more technically challenging task than the one Juvarra faced at Stupinigi. Indeed, it was Vittone's mastery of statics that chiefly distinguished him from Juvarra.⁴⁰⁵ For Juvarra structural considerations were always a matter of peripheral concern; for Vittone they were always one of central concern.⁴⁰⁶

In designing Santa Chiara Vittone borrowed heavily from the Carmine, and indeed Vittone's church is very much a centralized version of the Carmine.⁴⁰⁷ Vittone took from Juvarra's church the open, double tier arrangement of side chapels and pseudo-gallery and applied it to his own design.⁴⁰⁸ He also took from Juvarra's church the free-spanning arches that screen the pseudo-gallery and adapted them to the gallery arches of Santa Chiara, topping them with tympana and putti.⁴⁰⁹ Unlike Juvarra's arches, however, Vittone's arches are curved in plan.⁴¹⁰

⁴⁰⁵ POMMER, *Eighteenth-Century*, p. 113.

⁴⁰⁶ IBID., p. 112.

⁴⁰⁷ WITTKOWER, *Art and Architecture*, p. 428: "Much more closely than at Vallinotto, Vittone adjusted the system of Juvarra's Carmine to his centralized plan [of Santa Chiara]." On Santa Chiara's debt to the Carmine, see also PORTOGHESI, "Metodo e poesia," p. 104; MILLON, "Vittone," *Architectural Review*, p. 101; NORBERG-SCHULZ, *Late Baroque*, p. 178; IDEM., "Centrality and Extension," p. 97; and TAVASSI LA GRECA, *Bernardo Antonio Vittone*, p. 33.

⁴⁰⁸ OECHSLIN, "Vittone e l'architettura," p. 44.

⁴⁰⁹ PORTOGHESI, "Metodo e poesia," p. 104.

⁴¹⁰ Vittone introduced similar arches, again derived from those of the Carmine, in San Gaetano at Nice, Santa Chiara at Vercelli, San Michele at Borgo d'Ale, and his project for Santa Maria dei Servi at Alessandria; see OECHSLIN, "Vittone e l'architettura," pp. 45-46; and DARDENELLO, "Open Architecture," p. 111, note 48 on p. 115.

Santa Chiara at Bra also continues the long line of development of Juvarra's centrally planned church designs, from his church project presented to the Accademia di San Luca in 1707 to Sant'Andrea at Chieri.⁴¹¹ Indeed, the same general airiness and openness of structure, vertical unity of space, and striking scenographic character that characterize Juvarra's churches and church projects also characterize Santa Chiara at Bra.⁴¹² Vittone's church displays a special affinity with Sant'Andrea at Chieri.⁴¹³ Both churches were designed on the same plan, a modified Greek cross in which lobed apses are appended on the cardinal axes to a cylindrical core.⁴¹⁴ Both were embedded within a pre-existing convent.⁴¹⁵ Both featured the same lantern and a dome with the baseline edges severely cut away. In addition, both churches were designed with four piers marking out a square crossing, each pier faced with paired superimposed orders continuing upward into the paired ribs of the vault in a manner that emphasizes the vertical continuity of line. Moreover, both churches incorporated a superimposition of orders that reversed the

⁴¹¹ POMMER, *Eighteenth-Century*, pp. 37-38.

⁴¹² On the resemblance of Santa Chiara to Juvarra's project for the Duomo Nuovo, for example, see WITTKOWER, *Art and Architecture*, p. 428.

⁴¹³ POMMER, *Eighteenth-Century*, p. 113. After Juvarra's death Vittone received several commissions connected to Sant'Andrea, including one for the organ, for which he drew up several plans in 1743, and perhaps another for the campanile; see W. CANAVESIO, "I progetti di Bernardo Antonio Vittone per l'organo della chiesa di Sant'Andrea a Chieri," *Studi Piemontesi* XXXI:1 (June 2002), pp. 109-114; and IDEM., "Il campanile di Sant'Andrea a Chieri opera di Bernardo Antonio Vittone: un'ipotesi," *Bollettino della Società Piemontese di Archeologia e Belle Arti* n.s. LIII (2001-02), pp. 197-201. See also CAVALLARI MURAT, *Antologia*, p. 103, who draws connections between Sant'Andrea at Chieri and Vittone's churches of Santa Croce at Villanova di Mondovì and Santa Maria di Piazza in Turin.

⁴¹⁴ POMMER, *Eighteenth-Century*, p. 113, note 48 on p. 126.

⁴¹⁵ The nuns who were cloistered at Sant'Andrea belonged to the Cistercian order whereas those at Santa Chiara belonged to the Clarissan order. The church of Sant'Andrea was destroyed by French troops during the early nineteenth century, but the convent still exists as a school (IBID., p. 38).

usual practice, with pilasters at the ground level supporting half-columns at the gallery level. Even the size and measurements of both churches appear to have been practically the same.⁴¹⁶

Santa Chiara at Bra bears in addition a close resemblance to several provincial churches in Piedmont. Its Greek cross plan, for example, recalls that of Francesco Lanfranchi's much earlier church of the Visitazione in Turin (1657-60), especially in the way the entrance and liturgical axis of the church are aligned diagonally on the corner of the monastic block.⁴¹⁷ Vittone's church also bears a striking similarity to Francesco Gallo's church of Santa Chiara at Mondovì Piazza (1712-24; Figure 4.107).⁴¹⁸ Indeed, both churches were commissioned by Clarissan nuns and dedicated to St. Clare; both were erected on sites south of Turin in the Cuneese region of Piedmont; both were embedded within monastic complexes; both have Greek cross plans with a circular core; and both are supported by four piers marking out a square in plan, with each of the four piers faced with pairs of superimposed orders that in turn, in one unimpeded vertical sweep, support pairs of ribs in the dome. Finally, in both churches the webbing of the dome is given over on the

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⁴¹⁶ Pommer, in one passage (IBID., p. 113), gives the measurements of both churches as 27 *trabucchi* for the height to the top of the vault, nine *trabucchi* for the height of each level or tier, and four *trabucchi* for the diameter of the circular core. However, in another passage (IBID., p. 39), he gives the height of Sant'Andrea as 27 meters which equals only nine *trabucchi* (since one *trabucco* equals 3.0864 meters).

⁴¹⁷ Ironically, a plan of Lanfranchi's church was delineated little more than a century later by Vittone's own assistant, Mario Ludovico Quarini, who in 1765 had been commissioned to design the façade; see CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 27, no. 13, pl. 10-b. On Lanfranco and the Visitazione, see also E. OLIVERO, "Il Palazzo Municipale di Torino ed il suo architetto," *Torino* VII:12 (1927), pp. 373-393; A. CAVALLARI MURAT, "Il Lanfranchi ed altri artisti all'Eremo di Lanzo," *Bollettino della Società Piemontese di Archeologia e Belle Arti* n.s. XIV-XV (1960-61), pp. 47-82; and TAMBURINI, *Le chiese*, pp. 179-185.

⁴¹⁸ See CARBONERI, *L'architetto Francesco Gallo*, pp. 92-94, fig. 5, pls. 15-17; and COMOLI/PALMUCCI, *Francesco Gallo*, pp. 230-232.

cardinal axes, in between the paired ribs, to paintings of St. Clare and St. Francis in glorious ascent. In the case of Gallo's dome, the paintings are depicted on four large oval panels affixed directly to the webbing. In the case of Vittone's dome, they are depicted on the intrados of the outer shell of the dome, and made visible to the spectator below through the four apertures inserted into the webbing of the inner shell. The general arrangement of the two churches is thus practically identical, the only significant differences between them being the shape of the apses in plan (quadrangular in Gallo's church, rounded in Vittone's) and the number of shells in the dome (single in Gallo's church, double in Vittone's).⁴¹⁹ In all probability then, Vittone, who carefully studied Gallo's architecture and was in general greatly influenced by it,⁴²⁰ took a hard, close look at Santa Chiara at Mondovì Piazza and applied key aspects of its design to his own design for Santa Chiara at Bra.⁴²¹

⁴¹⁹ The striking resemblance between Vittone's church at Bra and Gallo's church at Mondovì Piazza gives support to the thesis, advanced by R. POMMER, Review of *Bernardo Vittone e la disputa fra classicismo e barocco nel settecento*, edited by V. Viale, *The Art Bulletin* LVIII:1 (March 1976), p. 132, that Vittone's architecture is more properly identified with the narrow provincialism of Piedmont than with the broad internationalism of Europe.

⁴²⁰ On Vittone's keen interest in, and study of, Gallo's architecture, see MARINI, *L'architettura barocca*, p. 154. Gallo's practice frequently intersected with that of both Vittone's uncle, Gian Giacomo Plantery, and Vittone himself. In 1717, for example, Gallo was requested by the Confraternity of the Assunta at Savigliano to sanction for approval Plantery's recently built church, and in 1721 Gallo submitted his own newly drafted designs for the choir, sacristy, annex house, and façade; see CARBONERI, *L'architetto Francesco Gallo*, pp. 25, 27, 32, 114; IDEM., "Architettura," in *Mostra del Barocco*, I, p. 43, no. 73; and COMOLI/PALMUCCI, *Francesco Gallo*, pp. 236-237. In 1724, Gallo and Plantery again crossed paths on another commission, the Ospedale of the Santissima Trinità at Fossano, for which the two architects submitted competing designs, with Gallo winning the commission; see CARBONERI, *L'architetto Francesco Gallo*, pp. 131-132. As for interaction between Gallo and Vittone, the two architects frequently submitted designs for the same project, including schemes for the parish church of the Assunta at Venesca (1749-55) which were eventually incorporated into Paolo Ottavio Ruffino's final design; see GABRIELLI, *Arte nell'antico*, pp. 197, 214; and *Guida Touring Club*, pp. 342-343, and the Palazzo Bava San Paolo at Fossano; see C. MORRA, "Disegni di Francesco Gallo e di Bernardo Antonio Vittone per palazzo Bava San Paolo poi Daviso di Charvenshod a Fossano," *Porti di Magnin* n.s. (April 1996), pp. 16-18. In addition, Vittone came to be associated with several commissions initially awarded to Gallo, including many that he inherited after Gallo's death in 1750. For example, in 1750 Vittone inherited the commission for the central chapel, the Sacro Pilone, at Vicoforte Mondovì, which he

Vittone's design for Santa Chiara at Bra, as illustrated in *Istruzioni diverse*, was published in 1766 more than 20 years after it was drawn up and construction of the church begun. Yet it differs in several important respects from the version that was built — in plan, in section, and in elevation. As mentioned above, the four apses reserved for the chapels and entrance are given a rounder curvature in the original plan than in the built version. The original apses each follow the curvature of a circle while those of the built version are slightly flatter and more ovoid. It is a change that necessarily was made prior to the commencement of construction since the walls of the apses are borne by foundation footings whose own position was fixed by the revised flattened curvature.

The change in plan necessitated a corresponding change in the curvature of the gallery arches that encircle the central rotunda. These arches effectively are curved in three-dimensions, in plan and elevation, and, as illustrated in the original plan published in *Istruzioni diverse*, they closely follow the perimeter of the circular core of the church. In construction,

nevertheless completed after Gallo's design; see CARBONERI, *L'architetto Francesco Gallo*, p. 156; IDEM., "Architettura," in *Mostra del Barocco*, I, p. 42, no. 70; and COMOLI/PALMUCCI, *Francesco Gallo*, pp. 119, 266, 269. In 1751 Vittone received a commission for the campanile to Gallo's parish church of Santa Caterina at Garessio Ponte (1723-41) for which he submitted a design, although the campanile was not erected until 1781 after another architect's design. And in 1754 Vittone submitted designs for the Certosa at Casotto that he presumably modified after previous designs drawn up by Gallo; see A. BONINO, "Francesco Gallo, architetto," *Bollettino della Società Piemontese di Archeologia e Belle Arte* XII:1-2 (January-June 1928), pp. 20-45, here p. 30. There is also Vittone's vaulted crossing bay of Santi Pietro e Paolo at Mondovì Breo that he designed and erected in 1755, which is flanked to either side by a chapel designed by Gallo 30 years earlier (Gallo's right chapel was designed and built 1722-27 and his left chapel was constructed 1751-54 after a design of about 1722); see N. CARBONERI, "Gallo e Vittone nella chiesa dei Santi Pietro e Paolo in Mondovì Breo," *Bollettino della Società Piemontese di Archeologia e Belle Arti* n.s. II:1-4 (1948), pp. 99-111; IDEM., *L'architetto Francesco Gallo*, pp. 122-123, pl. 30, figs. 10-11; and COMOLI/PALMUCCI, *Francesco Gallo*, pp. 244-245.

⁴²¹ Gallo's Santa Chiara at Mondovì Piazza also closely anticipated Juvarra's Sant'Andrea at Chieri. an indication that Juvarra himself was largely influenced by Gallo's design (Juvarra began his church just four years after Gallo had completed his). Juvarra's debt to the provincial architecture in Piedmont in general, and to Gallo and Plantery's architecture in particular, is inadequately understood and in need of further study.

however, the curving of the arches along the circumference of the core proved impossible to maintain as room had to be made for the vertex openings in the gallery vaults.⁴²² Vittone therefore equipped the arches with a flatter curve in plan, pushed back just far enough to give the illusion that they circumscribe the perimeter of the circular core.

In a like manner, the exterior crown or *coronamento* of Vittone's church is flatter in section in the built version than it is in the original one, with the curvature of the outer shell no longer closely following the curvature of the inner one as it does in the original design. The roof of the *coronamento* is pictured in the plate of Vittone's treatise as a curved and undulating structure that, covered by a sheathing of lead, would have capped the quadri-lobed church "in a final coda."⁴²³ It is also pictured with an elaborate lantern and four large dormer windows, each centered on the haunch one of the four lobed terminations. In the built version, however, the roof is a setback-hipped structure covered in terra cotta tiles, the graceful curves of the original roof replaced by the faceted, angled planes of the hips and attic. The dormer windows are replaced by a cluster of windows inserted into the angled faces of the attic wall that terminates the setback tiers.⁴²⁴ In its original version, the

⁴²² POMMER, *Eighteenth-Century*, p. 113.

⁴²³ IBID., p. 270.

⁴²⁴ Still another change to the church, more subtle than the others, involves the finish to the exterior of the church. The original design, as delineated in the plate in *Istruzioni diverse*, called for a stucco finish. However, the building as executed is faced in red brick obviously meant to be seen in its own right as its many elegant and finely detailed mouldings attest, suggesting that a decision was made at a very early date in the construction process to dispense with the stucco coating; see PORTOGHESI, "La chiesa di Santa Chiara," p. 5; and IDEM., *Bernardo Vittone*, p. 113. Vittone often preferred red brick for the exterior finish, specifying it, for example, for his churches at Grignasco and at Rivarolo Canavese, both of which, like Santa Chiara at Bra, are characterized by finely detailed mouldings.

exterior of the *coronamento* is a curved, sinuous, undulating covering. In its constructed version it is an angled, stepped, faceted one.

The circumstances that gave rise to the changes to the original design for Santa Chiara at Bra are unclear, but it would seem, at least with respect to the alteration made to the *coronamento*, that it was dictated by the need to cut costs.⁴²⁵ The original *coronamento*, with its elaborately curved masonry shell and lead sheathing, would certainly have cost much more to build, and taxed the nuns' limited treasury more severely, than did the revised *coronamento* with its wooden hipped construction and terra cotta tiles.⁴²⁶ The changes may also have been made to facilitate construction. Whatever the reason for the change, Vittone took advantage of this constraint to rethink the manner in which light is received, reflected, and diffused throughout the upper zone of the church. In the original design of the *coronamento*, the dormer windows are positioned on the haunches of the lobed terminations in a manner that brings light directly into the central interior of the church through the perforations of the inner shell of the dome. In this position the hooded soffits of the dormer windows are situated directly within the sight line of the spectator standing in the center of the church below. In the constructed version of the *coronamento* the windows are removed to the periphery, away from the apertures of the inner shell and repositioned much closer to the vertex openings of the gallery vaults, a repositioning that brings less light directly to the center of the interior

⁴²⁵ The Clarissan nuns only had enough funds to build the choir and small parts of the wall of the church, and had to take out a loan to finance construction of the remainder of the church; see A. MATHIS, *Storia dei monumenti sacri e delle famiglie di Bra* (Alba, 1888; facs. ed., Bologna, 1968), p. 88; and POMMER, *Eighteenth-Century*, pp. 269-270, § 4. See also J. RYKWERT, Review of *Bernardo Vittone, un architetto tra illuminismo e Rococo*, by P. Portoghesi, *Domus* 451 (June 6, 1967), p. 2, who concludes that the change in design was due to the poverty of the nuns.

⁴²⁶ On the lead sheathing of the original dome, see PORTOGHESI, "La chiesa di Santa Chiara," pp. 5, 6; IDEM., *Bernardo Vittone*, pp. 112, 113; and POMMER, *Eighteenth-Century*, p. 270.

space and more to the sides. In other words, the exterior windows of the revised *coronamento* are no longer visible directly to the spectator below through the apertures of the inner shell, as they would have been in the original design. Instead, they are visible through the vertex openings of the gallery vaults. In the original version of the *coronamento*, it is the inner hood of the dormer windows that the spectator would have seen while looking through the apertures of the inner shell, a rounded surface not particularly suitable for the reception and display of fresco. And indeed, there is no indication in the section illustrated in *Istruzioni diverse* of a fresco on the outer shell of the original *coronamento*. In the revised version of the *coronamento* it is the intrados of the outer shell that the spectator sees, a flatter surface than the original *coronamento* and more fit for the ready reception and display of fresco.

The revised *coronamento* has other advantages as well. It is a more flexible and efficient apparatus for introducing light into the interior. In the original design there are only five skylights, the lantern, and four dormer windows, one each set into the haunch of the four lobed terminations. In the revised design as constructed there are 13 skylights, the lantern and 12 attic windows collected in four groups of three, each group terminating one of the four set-back tiers of the hipped roof. The dormer windows of the original design, one to each of the lobed terminations of the roof, face one direction only; the attic windows of the revised design, three to each of the apsidal terminations, face multiple directions. In other words, the fenestration of the revised *coronamento* admits more light and from more directions than does that of the original design, thus ensuring that the upper reaches of the interior dome would be more amply and efficiently illuminated at all times of the day.

Construction of Santa Chiara at Bra was begun in 1742 and completed in 1748.⁴²⁷ However, it is not clear from the documents when the *coronamento* itself was constructed, nor is it clear whether or not Vittone was responsible for it. Portoghesi considers it strange that as late as 1766, just four years prior to his death, Vittone published in his treatise a design for the *coronamento* that differs from the one that was built.⁴²⁸ This led him to conclude that the construction of the *coronamento* took place sometime after the publication of his treatise in 1766 and perhaps after Vittone's death.⁴²⁹ Pommer too, in agreement with Portoghesi, dates the construction of the revised *coronamento* to sometime after Vittone's death.⁴³⁰ According to Pommer the documents leave open the possibility that the *coronamento* was built during the early 1770s, and in support of a late date he points out that the lantern was not built until 1784, and that the ceiling paintings were not completed until the 1780s.⁴³¹

The lantern, however, is not an essential part of the *coronamento* and its construction could have taken place at a much later date than that of the dome itself. As for the ceiling paintings, it is unclear on what basis Pommer determines their date since the only information that can be gleaned with

⁴²⁷ The foundation stone was laid on 27 May 1742, with the benediction and foundation ceremony celebrated by Prior Martini, special legate of the Archbishop of Turin. On 1 August 1748 the new church was opened and the first Mass celebrated there by Monsignor Giambattista Roero. The sacristy adjacent to the nun's choir was finished on 6 June 1753, and the decoration of the main altar was completed in 1776. The confessionals and *coretti* were completed by 1777, and the lantern was added in 1784. On the construction history of Santa Chiara, see MATHIS, *Storia dei monumenti*, p. 88; POMMER, *Eighteenth-Century*, Appendix XIII, F, pp. 268-271; and BARBERO/BLANGINO/MOLINARO, "Le Clarisse," pp. 128-129.

⁴²⁸ PORTOGHESI, "La chiesa di Santa Chiara," p. 5; IDEM., *Bernardo Vittone*, p. 113.

⁴²⁹ IDEM., "La chiesa di Santa Chiara," p. 5.

⁴³⁰ POMMER, *Eighteenth-Century*, p. 270.

⁴³¹ IBID., p. 270.

certainty from the documents he cites and publishes is the identity of the painter, a certain Pietro Paolo Operti (1704-93).⁴³² Operti was born the same year as Vittone himself and so if, as Pommer asserts, he painted the vaults during the 1780s, then he would have done so as a late septuagenarian or even as an early octogenarian, an improbable age for the scaling of heights on scaffolding which the job of painting the frescoes would have required. There is in fact nothing in the documentation that Pommer publishes to preclude the possibility that Operti painted the ceiling frescoes sometime before Vittone's death. Moreover, there are other scholars, historians of painting, who have dated Operti's frescoes at Santa Chiara to 1750 or earlier.⁴³³

It is significant for this question that, while the half-section of Santa Chiara as illustrated on the plate of *Istruzioni diverse* does not depict the fresco painted on the outer shell of the dome,⁴³⁴ Vittone specifically mentions the

⁴³² IBID., p. 269, § 3. § Account B, f. 4: "Il pittore delle due volte [fu] il Sig.r [Pietro] Operti [1704-1793] di questa città di Bra." See also MATHIS, *Storia dei monumenti*, p. 88. On Operti and his frescoes at Bra, see also L. BOTTO, ed., *Pietro Paolo Operti, Agostino Cottolengo, Gioacchino Nogarì: Materiali per la conoscenza di tre pittori braidesi, 1704-1964* (Bra, 1986); E. PEROTTO, "Novità su Pietro Paolo Operti, pittore braidese del Settecento," *Studi Piemontesi* XX:1 (March 1991), pp. 71-84; IDEM., "Il 'virtuosissimo sig. Pietro Paolo Operti' pittore braidese," *Cuneo Provincia Granda* III (1991), pp. 43-45; and L. FACCHIN, "Bernardo Antonio Vittone, la pittura e i pittori," in W. Canavesio, ed., *Il voluttuoso genio dell'occhio: Nuovi studi su Bernardo Antonio Vittone* (Turin, 2005), pp. 131-163.

⁴³³ According to L. BOTTO, "Pittura," in *Arte in Bra* (Bra, 1988), pp. 161-288, here p. 220; and PEROTTO, "Novità," p. 72, note 7, the ceiling frescoes are, in all probability, the early work of Operti, executed before 1751 when he began painting the frescoes of another church at Bra, Santa Maria degli Angeli. On the other hand, it is certain that other frescoes in Santa Chiara, namely the figures of the Four Doctors of the Church affixed to the piers at gallery level, were painted in 1780; see POMMER, *Eighteenth-Century*, p. 269, § 3. § Account A. However, there is no indication that these frescoes are Operti's work, and in the personal opinion of Botto ("Pittura," in *Arte in Bra*, p. 220), they are not by Operti's hand.

⁴³⁴ This stands in stark contrast to the section of the Visitazione at Vallinotto illustrated in *Istruzioni diverse* in which the fresco affixed to the dome is vividly depicted. On the other hand, frescoes by Giovanni Battista Crosato (ca. 1742) are known to have covered the dome of Vittone's lost church of Santi Marco e Leonardo in Turin (1741-42, demolished 1813), are yet they are neither described in the text of *Istruzioni diverse* nor illustrated in the corresponding plate.

fresco in his description of the church.⁴³⁵ It is difficult to imagine that Vittone would have written so assuredly of the ceiling paintings in *Istruzioni diverse* if they in fact did not already exist at the time of his writing. For Vittone does not write of the frescoes as though they had not yet been executed, but pointedly refers to them as already existing: “...le Pitture esistenti nella Volta superiore...”⁴³⁶ One may reasonably conclude then that the ceiling frescoes to which Vittone refers in *Istruzioni diverse* were already in place at the time of his writing his treatise, and that these frescoes are the same ones that we see today, and consequently that the outer shell upon which the frescoes are painted, together with the entire *coronamento*, was also in place at the time of Vittone’s writing.⁴³⁷

It follows from this then that it was Vittone himself, in all probability, who was responsible for the revision to the *coronamento*.⁴³⁸ After all, it was

⁴³⁵ VITTONI, *Istruzioni diverse*, p. 185: “La volta è doppia, e per quattro grandi aperture, che formate sonosi ne’ quattro principali campi dell’ inferiore alla vista presentansi di chi sta in Chiesa le Pitture esistenti nella Volta superiore [italics mine], coll’ ajuto però del lume, che loro prestano gli occhj a lucello, che vi sono all’ intorno, e delle aperture, che esistono nelle Volte delle suddette Tribune.”

⁴³⁶ By contrast, with regard to the fresco on the dome of the Visitazione at Vallinotto, Vittone does not speak of the perspectival diminutions that were to have been painted on it as already existing, but as having never been executed (IBID., p. 186): “Era mio pensiero, che l’aspetto di tale pitture fosse in degradazione prospettica, ma la fretta dell’ esecuzione bramata dal suddetto Signore non permise, che intieramente riuscisse il desiderato effetto dell’ Opera.”

⁴³⁷ In describing the frescoes of the outer shell as already existing, Vittone refers to the “occhj a lucello” of the dome as having already been constructed (IBID., p. 185), a term that POMMER, *Eighteenth-Century*, p. 270, §6, note 1, translates as “bird’s-eye windows” or “skylights” and understands to mean the dormer windows of the original design for the dome. If this is what Vittone meant by the term then his reference to them as having been built cannot be made easily to square with the facts of construction since such dormer windows do not appear in the present dome. On the other hand, Vittone may have used the term “occhj a lucello” to mean the four triangular-lobed apertures in the inner shell of the baldachin, as CAVALLARI MURAT, “L’architettura sacra,” p. 43 understands the term, or perhaps he used it to mean the round windows inserted into the terminations of the *coronamento* as it was revised and built.

⁴³⁸ POMMER, *Eighteenth-Century*, p. 270, admits that the ceiling paintings reflect Vittone’s ideas, that they fit the architecture well, and that the theme of saints and angels ascending towards heaven is a cognate to the system at Vallinotto.

certainly Vittone who made the changes to the plan since these changes could only have occurred prior to the laying of the foundations in 1742.⁴³⁹ The changes to the *coronamento* must also date to the early years of construction, particularly since such changes were made necessary, in part, by the revisions made to the plan. Moreover, the setback tier of the constructed *coronamento* with its angled, faceted planes is itself not too dissimilar from other coverings that Vittone erected during the early 1740s, notably the drum of San Bernardino at Chieri.

If changes were made to Santa Chiara during the early 1740s, as appears certain, then why in 1766 should Vittone have published a design for the church other than the one that was built? Admittedly, it is not too uncommon for there to be a divergence between the design for a church as published in *Istruzioni diverse* and the design as actually constructed. Vittone published a project for Santa Chiara at Vercelli, for example, other than the one that was built. However, in this instance he makes it clear to the reader that the published design had been subjected to variations during the construction process.⁴⁴⁰ Vittone also published a preliminary, unexecuted design for Santa Chiara in Turin, but again without confusion since he publishes it side by side with the final, revised design as executed.⁴⁴¹ Then there is the published design for the Visitazione at Vallinotto, discussed

⁴³⁹ There is also the matter of the walling up of the windows, a procedure that PORTOGHESI, "La chiesa di Santa Chiara," p. 6; and IDEM., *Bernardo Vittone*, p. 115, attributes to Vittone as part of the original construction process, but which POMMER, *Eighteenth-Century*, p. 271, attributes to someone else as part of a much later intervention.

⁴⁴⁰ VITTONI, *Istruzioni diverse*, p. 184: "Rappresentasi nella Tav. 72. l'idea progettata per la Chiesa delle Monache di S. Chiara della Città di Vercelli, non già però intieramente quale ella fu poi per variazione fattane eseguita." See also PORTOGHESI, *Bernardo Vittone*, p. 113.

⁴⁴¹ VITTONI, *Istruzioni diverse*, pp. 183-184, pls. 69-70.

above, that Vittone illustrates with its original hemispherical dome instead of the pagoda-like crown that one sees today. In this case, however, the published design was constructed, but was subsequently altered, in all likelihood long after Vittone's death.⁴⁴²

Santa Chiara at Bra then, unlike all other examples cited, is a clear case, indeed the only case, in which Vittone published a design for a church different from that which was erected and standing in place at the time of the publication of his treatise, and in which Vittone does not inform the reader of the difference. The question remains. Why did Vittone publish a design for Santa Chiara at Bra that was at variance with the one that was erected? The most likely reason is that the original design features certain desirable properties, in particular geometric clarity and spatial cohesion, that are compromised in the revised design, but which Vittone nevertheless may have wanted to highlight in his treatise. The semi-circular geometry of the apses in plan, and of the shells of the dome in section, is compromised in the revised design by the flattening of both apses and shells. The integrity of the geometry, so prominent in the original design, was sacrificed in the revised design in order to reduce construction costs, to facilitate construction, and to enhance the scenographic effect. By publishing the original design in his treatise, however, Vittone discloses the geometric and spatial rationale that underlay his initial conception.

⁴⁴² It is unclear when the remodeling of the Visitazione took place, but if it took place between 1744 and 1749, as Chierici asserts ("Vittone inedito," p. 107; "La cupola," p. 71), then it would have occurred several decades before publication of *Istruzioni diverse* in 1766. But if it took place during the early nineteenth century, then it would have occurred well after publication of the treatise. Until the date of the dome's reconstruction can be established, the question of whether or not Vittone purposely published a design for the Visitazione other than the one that was constructed and existing at the time of publication cannot be determined.

As built the revised *coronamento* appears to have been an improvised fabrication drawn up on the spot during the process of construction and much akin in this respect to another improvised fabrication that produces a decidedly scenographic effect, namely the *salone* vault in Juvarra's Palazzina at Stupinigi. As noted above, Juvarra designed the *salone* vault at Stupinigi as a double-shelled structure, with the interior shell independent of the exterior covering in a manner that imparts a notable ephemeral and even theatrical quality to the interior. To the extent then that the *salone* of Stupinigi may be understood to assume the character of "a theatre within a theatre," so too Vittone's church at Bra may be understood in the same way, and so Vittone's Visitazione at Vallinotto, begun just two years after the *salone* of Stupinigi was completed. In the words of Sacheverell Sitwell:

...[Vittone] could not but be influenced, too, by the achievement of Juvarra in the ball-room or great hall of Stupinigi. There [in the Visitazione], something transitory was given the same permanence as the eternities he was trying to depict by breaking through a false dome into a higher one, and into another beyond that, and then into the lantern. And in the end, both of them, the ball-room at Stupinigi and the four domes at Vallinotto are theatre or artifice...⁴⁴³

Likewise, in Santa Chiara at Bra something transitory was given permanence, again as it was at Stupinigi.

Santa Chiara at Bra marks the culmination of Vittone's work with multiple, perforated shells. Rarely afterward would Vittone design domes with such shells again. Henceforth, he would design simpler, more conventional domes, comprised of a single, relatively closed shell, his

⁴⁴³ SITWELL, *Baroque and Rococo*, p. 132.

inventive powers now turned toward the pendentive, for which he would devise ever more sophisticated and open variations.⁴⁴⁴

The Open Pendentive

Background and Precedent

Closely related to the open dome is the open pendentive. It is a motif that Vittone fully exploited for scenic effect, and one whose origins lay in a number of sources, namely the open corners of Borromini and Guarini's architecture, the screened and chamfered corners of Juvarra and Michetti's architecture, the corner sections of Plantery's palace vaults, and, to be discussed in the following chapter, the fictive openings depicted in *quadratura* painting as affixed to pendentives and vault corners.

The pendentive, a spherical triangle that facilitates the structural and formal transition from the circular base of the dome above to the square support of the crossing arches and piers below, is typically a solid masonry structure. Moreover, it is a structure that by definition turns the corner, and thus like all corners it was traditionally thought to require continuity of mass and surface.

It was in Borromini's architecture, notable among other things for its beveled, curved, and open corners, that the possibility of opening up the pendentive was first suggested, although Borromini himself never went so far as to perforate the pendentive. The open corner appears in Borromini's

⁴⁴⁴ Vittone never entirely abandoned the perforated shell. Late in his practice he inserted oculi in the vault of his Chapel of San Secondo in the church of San Secondo at Asti (1766-89); see A. BELLINI, "Un'opera sconosciuta di Bernardo Vittone: La Cappella di San Secondo nella omonima chiesa di Asti," in Viale, ed., *Bernardo Vittone e la disputa*, II, pp. 355-379, figs. 6-10.

architecture as early as 1634, in the cloister of San Carlo alle Quattro Fontane in Rome. There Borromini wrapped serlianas continuously around the four sides of the courtyard. But instead of massing the columns at the corners, as was the typical practice, Borromini pulled them away in a manner that leaves a void there.⁴⁴⁵ The solidity of the corner is thereby denied and its stability is visually negated. The corner is not only open but also rounded in a convex curvature.

Beveled corners also occur in the church interior of San Carlino itself, in the chamfered crossing piers that support the pendentives and oval dome, and that serve as a deliberate counterpoint to the curved, open corners of the cloister. Into these pendentives Borromini inserted large oval roundels, undercut in deep relief. It is in the deep undercutting of the roundels that the suggestion of a perforated pendentive was first tentatively made.

Borromini also introduced variations of the open, beveled corner in the courtyard in the Oratory of the Filippini, in which the corner is concave and hollowed out by deep niches, and the interiors of Santa Maria dei Sette Dolori and the Re Magi Chapel, in which the corner is again concave in plan and perforated by a window at the base of the vault just above the entablature (Figure 4.3). In the latter building the window is framed by one of the ribs of the basket vault. This rib is an arch that spans the corner on the diagonal and thus it functions in the manner of a squinch, albeit one whose conch, so to

⁴⁴⁵ The continuous wrapping of the serliana around the sides of a courtyard was a common motif of the time, appearing, for example, in the cloister of Pellegrino Pellegrini's Collegio Borromeo in Pavia (begun 1564), the cloister of Bartolomeo Bianca's Palace of the University (built as a Jesuit College) in Genoa (planned 1630, construction begun 1634), and the arcades in Santissima Annunziata, San Siro, and Santa Maria della Vigna in Genoa. In Rome it is found in the courtyard of the Palazzo Borghese. See BLUNT, *Borromini*, pp. 14-15, fig. 2; and WITTKOWER, *Art and Architecture*, pp. 123-125, note 48 on p. 522, figs. 60-61. In all of these examples, however, the corners of the courtyard are occupied by the column or pier of the serliana, and not by the void as in Borromini's cloister.

speak, has been eliminated by the window.⁴⁴⁶ In the Re Magi Chapel, a doorway and window are also inserted into the corner, transforming it from a traditionally closed and dark zone to an open and luminous one.

For all of his innovations, however, Borromini never actually perforated the pendentive. That step was first taken by Guarini in his design for the Sindone. But before considering the Sindone it is instructive to consider Guarini's San Lorenzo which, while it does not feature the perforated pendentive itself, introduces a number of innovations relevant to it. The pendentive of San Lorenzo is closed, but the zones of the corner both above and below it are remarkably open. The pendentive is supported by a serliana, the central arch of which occupies the corner as a void, and the wall of which is punctured by oculi, one above the keystone of the central arch and one each above the lintels of the lateral bays. These oculi occur only on the corner serlianas, not on the serlianas positioned on the cardinal axes of the church, a treatment that contributes thus to the opening up of the corner. Directly above the pendentive the annular cornice is perforated by an oculus and the drum is perforated by a window, with both the cornice oculus and the drum window vertically aligned in a manner that contributes further to the opening up of the corner. As for the pendentive itself, Guarini fabricated it not as a

⁴⁴⁶ Borromini made frequent use of the squinch and other forms of the corner arch. In the monastery of the Trinitarians at San Carlo alle Quattro Fontane, for example, he introduced squinches in the old sacristy in addition to corner arches that he employed in other rooms; see PORTOGHESI, *Rome of Borromini*, pls. 251, 371. Squinch-like structures also support the vault of the Sala delle Colonne in the Palazzo Giustiani; see IBID., pl. 252, and the vaults of several rooms in the Palazzo Falconieri; see IBID., pls. 253-254. Borromini also utilized corbels to support the corners of the vestibule vault of Sant'Agnese in Piazza Navona; see IBID., pl. 255. On Borromini's use of the squinch, see WITTKOWER, *Art and Architecture*, p. 212. The squinch is but one of many medieval motifs that occurs in Borromini's architecture. On Borromini's medievalism in general, see IDEM., "Theory and Practice: Borromini and Guarini; Their Forerunners and Successors," in *Gothic vs. Classic: Architectural Projects in Seventeenth-Century Italy* (New York, 1974), pp. 83-95.

solid structure in the traditional manner, but as a composite one, comprised of a thin sheathing of masonry that bears no load and masks the actual load bearing spur behind. It a sham pendentive, separate from the real structure, but capable of being perforated without prejudice to its stability.

It was in the Sindone that Guarini took the decisive step to perforate the pendentive. That the pendentive should occur at all in this edifice is something of an anomaly since the chapel rises from a circular plan that normally is without need of pendentives. In this case, however, the pendentives are brought about by the curious and unexpected triangulation that Guarini imparts to the rotunda. Into the original, pre-existing circular base that he inherited from an earlier architect, Guarini inserted three entrances that mark three corners, so to speak, of the interior space. Guarini flanked each of the entrances with shallow piers upon which three arches rise to support the dome. These arches form a triangular crossing that slightly reduces the diameter and interior span of the dome, necessitating thereby the introduction of three pendentives to facilitate the transition between the dome above and the triangular crossing below. Guarini perforated each of the three pendentives with a large oval oculus, just as he also perforated, with a similar oculus, each of the three shallow semi-domes encircled by the three crossing arches.⁴⁴⁷ There are thus a total of six oculi, each one vertically aligned with a window in the drum above. The three oculi that perforate the pendentives

⁴⁴⁷ See WITTKOWER, *Art and Architecture*, p. 408, note 18 on p. 562, who suggests that both the triangular geometry and the perforated pendentive of Guarini's design were inspired by the example of Borromini's architecture, the one by the triangular scheme of Sant'Ivo and the other by the oval relief in the pendentives of San Carlo alle Quattro Fontane. Pendentives with roundels set in deeply undercut relief also occur in Piedmont, in the Sanctuary of the Madonna del Pilone in Turin of 1644; see PROLA / PEYROT, *Architetture Barocche*, un-numbered page [listing under Torino], and the chapel of the Castello at Aglié of the late seventeenth century; see PEDRINI, *Ville dei secoli*, p. 113.

are, in addition, vertically aligned with the three entrances of the rotunda below. Each of the entrances, in turn, is framed by an aedicule that is rounded in plan according to a convex curvature set in opposition to the concave curvature of the rotunda walls.

The Sindone dome is comprised of six tiers of arched ribs, with each tier rotated in plan 30 degrees to the tier below. The arched ribs spring directly from the keystones of the arched ribs below, and span the corner angle formed by junctions of the ribs below. As such, technically speaking, the arched ribs of the Sindone dome are squinches, but with their conches entirely eliminated except for a central buttressing spur. The dome of the Sindone may be understood then as a complex latticework of perforated squinches.⁴⁴⁸ Thus the perforated squinch and the perforated pendentive both make their first appearance in the Sindone, and they do so in close conjunction with the interlaced ribbed dome.

Guarini's contemporaries and immediate followers in Piedmont were unable to make much of Guarini's innovation. No concerted attempt was made to perforate the pendentive until, some fifty years after Guarini's death, Vittone began experimenting with the idea in his academic projects. It is true that in 1667, the year San Lorenzo and the Sindone were both begun, Guarini's contemporary, Sebastiano Guala, designed San Filippo Neri at Casale

⁴⁴⁸ Guarini's idea of stacked tiers of arched ribs may have owed something to Islamic and medieval architecture in Sicily. In the thirteenth-century Church of the Badiazza in Messina, for example, a structure characterized by Islamic design features, and one that Guarini could have easily seen during his Sicilian sojourn, there are stacked tiers of arches arranged in a stalactite configuration, with the arches of each tier springing directly from the keystones of the arches below, an arrangement that bears a remarkable likeness to the stacked tiers of arched ribs in the dome of the Sindone; see A. GRISERI, *La metamorphosi del Barocco* (Turin, 1967), fig. 104.

Monferrato with pendentives that appear to be perforated (Figure 4.11).⁴⁴⁹ But Guala's perforations are fictive, not real.

Decades later Vittone's uncle, Gian Giacomo Plantery, devised palace vaults that, while they do not include pendentives, are characterized by open, scenographic corners that simultaneously delimit both angled and curved fields of space. These are the so-called Planterian vaults that invariably rise from rectangular bases of support but resolve themselves in rounded, curvaceous shells supported by undulating, serpentine ribs. The most notable and celebrated of these vaults are those that cap the atriums of Plantery's Palazzo Saluzzo Paesana and Palazzo Cavour in Turin (Figures 4.23-4.24). A variation on the Planterian vault occurs in other rooms of the Palazzo Saluzzo Paesana as well, in which the corner capped by its own separate vault and the vertical sweep of the wall below is interrupted by the insertion of large windows (or else panels with bas relief).⁴⁵⁰ It is this treatment of the corner as an autonomous, open zone united simultaneously to the quadrangular room below and to the curvilinear vault above that would, among other sources of inspiration, lead Vittone to devise his perforated and, in particular, his hollowed-out pendentive.

A different type of corner, but one that produces a comparable scenographic effect, was designed by Juvarra for the *salone* of his Villa Morra di Lavriano at Villastellone (1732-33), a building for which, it will be recalled, Vittone had designed the entrance stairway.⁴⁵¹ The *salone* is a modified oval in

⁴⁴⁹ VIALE FERRERO, *Ritratto di Casale*, pp. 55-56.

⁴⁵⁰ GRISERI, ed., *Palazzo Saluzzo*, pls. VI, XIII, XIV, XVII, and fig. 4 on p. 189.

⁴⁵¹ MOCCAGATTA, "La juvarriana Villa Morra," p. 382, fig. 6.

plan. At one end of the room, the end that faces onto the garden, the walls follow the curvature of the oval. At the other end, however, the walls are rectilinear planes that intersect one another at 90-degree angles to form two angled corners (Figure 4.108). The angular intersection is mitigated, however, by the oval curvature of the gallery which wraps around the corners, and by the prominent half-columns which, extending the full height of the *salone*, frame the corners, which in turn are capped by their own vault segment. The vault segment and the framing half-columns both serve to provide the corners with their own autonomous spatial domain. Juvarra opened up the corners by inserting doorways and large oculi into their wall planes. In short, the corners are simultaneously angled and curved, closed and open, separated from and conjoined to the main space of the *salone*, an ambiguous treatment that again anticipates that of Vittone's perforated and hollowed-out pendentives.

A comparable corner, simultaneously defined by both angular and beveled terminations, is also to be found in Nicola Michetti's Palazzo Colonna in Rome, which the architect restored and enlarged in 1730 just one year before Vittone arrived in the city to enroll in the Accademia di San Luca.⁴⁵² There, in one of the vaulted rooms facing onto the Piazza Venezia, Michetti introduced in the corner a free-spanning lintel perforated with a large conch-shaped opening that facilitates the transition from a rectangular space below to an octagonal vault above. It is a highly effective scenographic device that contributes both to the concealment of the small round windows of the attic and to the lightening of the structure. The free-spanning, perforated lintel also serves to isolate the corner, separating it from the main room, while at the

⁴⁵² See PORTOGHESI, *Roma Barocca*, p. 458, fig. 365.

same time facilitating a spatial flow between the two. It is, Portoghesi observes, an “airy diaphragm” similar in “conception to Juvarra’s open vaults in the church of the Carmine in Turin and to those of Vittone.”⁴⁵³ In short, the scenographic corners of Plantery, Juvarra, and Michetti’s palaces, while they do not feature perforated pendentives themselves, are nevertheless characterized by a general blurring and overlapping of spatial boundaries that closely anticipate Vittone’s open pendentives.

Vittone’s Designs

The open pendentive is a prominent and celebrated motif of Vittone’s architecture, frequently making its appearance in close conjunction with the interlaced ribbed dome, precisely the same combination of elements that had been brought together earlier by Guarini. Vittone’s open pendentives are of two types: 1) the perforated type in which the veil or sail is bored entirely through with a hole, and 2) the hollowed-out type in which the veil is scooped out by a deep vertical cavity, but without the boring extending completely through the structure as it does in the first type.⁴⁵⁴

Vittone concentrated his initial effort on developing the perforated pendentive, and it is this type that is predominant in his early work. Later, he developed the hollowed-out pendentive, the type that is predominant in his mature work. The perforated type of pendentive occurs in Vittone’s projects for a parish church “in some very conspicuous place” and Santa Chiara at

⁴⁵³ IBID., p. 458.

⁴⁵⁴ On Vittone’s hollowed-out pendentives, see PORTOGHESI, *Bernardo Vittone*, pp. 130-133.

Alessandria, both undated but of the mid to late 1730s, as well as in San Bernardino at Chieri (1740-44), and the chapel in the Certosa at Casotto (1754). It also occurs in San Luigi Gonzaga at Corteranzo Monferrato (1760), a church widely attributed to Vittone, but one whose design and execution, as suggested above, may have owed something to the hand of Vittone's assistant and collaborator, Mario Ludovico Quarini. The hollowed-out type of pendentive occurs in the Chapel of the Purificazione in the Ospizio di Carità at Carignano (1744-49), the renovated presbytery of Sant'Antonio Abate in Turin (*ca.* 1750, demolished 1830), Santa Maria di Piazza in Turin (*ca.* 1751-54), Santi Pietro e Paolo at Mondovì Breo (1755), and Santa Croce (now Santa Caterina) at Villanova di Mondovì (1755). After about 1755, and certainly after 1760, the open pendentive no longer appears in Vittone's architecture, the architect having abandoned the device altogether in his late work, just as he also, in his late work, abandoned all other scenographic devices, including the perforated, multi-shelled vault, the interlaced ribbed vault, the light chamber, and the perspectival motif.

The conventional pendentive, a spherical triangle, functions in its structural capacity to transmit the load of the dome to the supports of the crossing, while it functions in its spatial capacity to facilitate the transition of the circular geometry of the dome to the square geometry of the crossing. The conventional pendentive is entirely closed and intact and its outline clearly defined. It also constitutes a distinct horizontal stratum in the sequence of elements rising from the piers below to lantern above. All of this is undone by Vittone. Vittone's open pendentive is no longer solid and intact, its outline no longer clearly defined. And it no longer constitutes a distinct horizontal stratum, but is merged with the drum and dome above and the crossing piers

below to form a single unity and vertical continuity of line. Vittone's pendentive is perforated like the openwork dome itself, and it is this dissolution of mass, applied to pendentive and dome alike, that largely accounts for the unity of surface and space that so characterizes Vittone's churches. In opening up the pendentive, whether it be with perforations or with hollowed-out cavities, Vittone was motivated by two impulses: to enhance the interior illumination of the church and to accentuate the vertical continuity of structure and space. They are the same impulses, in fact, that inspired much of Gothic architecture, which explains why Vittone's open pendentives convey a sense of the Gothic, and in any case, repudiate the Renaissance tradition.

Vittone's open pendentives owe a significant debt, as scholars have frequently noted, to the innovations of Borromini, Guarini, Juvarra, and others. Wittkower, for example, traces the sources of inspiration for Vittone's open pendentives to the deeply undercut pendentives of San Carlino and the perforated pendentives of the Sindone.⁴⁵⁵ Tavassi La Greca also traces Vittone's idea of the perforated pendentive to the Sindone.⁴⁵⁶ Oechslin locates the sources for Vittone's open pendentive in the open, beveled corners of Borromini's architecture, in the vault of the Re Magi Chapel and the courtyard of the Oratory of the Filippini.⁴⁵⁷ Pommer observes that Vittone's open pendentive shares visual analogies with several of Juvarra's church projects,

⁴⁵⁵ WITTKOWER, "Vittone's Domes, p. 218.

⁴⁵⁶ TAVASSI LA GRECA, "Considerazioni," p. 260.

⁴⁵⁷ OECHSLIN, "Vittone e l'architettura," pp. 47-48, figs. 18-a, 18-b. See also *IBID.*, p. 48, fig. 16-a, who cites as yet another precursor to Vittone's open pendentives, Filippo Raguzzini's pendentive with decorative stucco relief in his chapel at Santa Maria in Trastevere in Rome.

in addition to the structural analogies that it shares with Guarini's work.⁴⁵⁸ Likewise, Roberto Gabetti understands Vittone's *scavo delle vele* to have been derived from Juvarra's research.⁴⁵⁹ Hellmut Hager sees Juvarra's unmistakable influence in the pendentive with an arched cornice that he sketched as part of a preliminary study for the dome of the Venaria Reale (Figure 4.109), a hybrid between a pendentive and a squinch that anticipates Vittone's hollowed-out pendentive.⁴⁶⁰ In addition, there are indications of perforated pendentives in some of Juvarra's designs for stage sets, notably one for the Teatro Ottoboni representing a "Deliziosa" from Scene III of "Giunio Bruto" (1711).⁴⁶¹ Finally, Giuseppe Dardanello sees Vittone's idea of the hollowed-out pendentive as having been imagined previously by Juvarra, in one of his studies for the vault of the *salone* of Stupinigi, and as having been prefigured in the pictorial illusionism of Andrea Pozzo, and before Pozzo, that of Giulio Bensi.⁴⁶²

Vittone's interest in the perforated pendentive manifested itself at an early stage in his practice, appearing for the first time in his project for a parish church "in some very conspicuous place" (Figure 4.38). This project is undated, but nevertheless it is unquestionably an immature work that predates the Sanctuary at Vallinotto, and thus is to be dated to the mid-1730s. In it the perforated pendentive is combined with an interlaced ribbed dome,

⁴⁵⁸ POMMER, *Eighteenth-Century*, p. 114, fig. 123.

⁴⁵⁹ R. GABETTI, "Eredità juvarriane," in *Studi juvarriani*, pp. 29-48, here p. 38.

⁴⁶⁰ HAGER, "Il significato," p. 62, fig. 3.

⁴⁶¹ VIALE FERRERO, *Filippo Juvarra scenografo*, p.167, pl. 49.

⁴⁶² DARDENELLO, "'Open Architecture,'" p. 111, notes 49-50 on p. 115, figs. 13-14; IDEM., "Il Piemonte Sabauda," in Curcio and Kieven, eds., *Storia dell'architettura italiana*, I, pp. 380-423, here p. 405.

both of which are characterized equally by an emphatic osseous quality. Pendentive and dome are so well integrated in this project that they form a perfect unitary whole, an indication that Vittone initially conceived the idea of the perforated pendentive in close relation with that of the interlaced ribbed dome, the idea of the one intrinsically connected to the idea of the other.

An oval oculus bores completely through the pendentive to admit light, puncturing it at its most structurally critical point. Moreover, the pendentive is arched like the preliminary pendentive that Juvarra had conceived earlier for the Venaria Reale (Figure 4.109). It is thus a pendentive arch, or more precisely a pendentive-squinch hybrid, and it springs from the haunches of the crossing arches to span the corner of the crossing on the diagonal. The pendentive arch rises to a greater height than does the main crossing arch itself, thereby breaking the impost of the cornice ring which is normally level, to form a sequence of “undulating crests.”⁴⁶³ In this manner the pendentive arch functions very much as a squinch, but one whose conch so to speak has been punctured through by the oculus. As such it recalls the arched ribs of Guarini’s dome of the Sindone which themselves, as noted above, function in the manner of squinches.

Vittone devised his parish church project as an abstract exercise for his own pleasure, an ideal solution unencumbered by pre-existing buildings or site constraints of any kind. It is an exercise also unencumbered by structural constraints. And indeed the perforated pendentive here is structurally unfeasible, the product of Vittone’s pure fancy, its purpose solely to open up the corner and convey a sense of structural precariousness. It is a device that,

⁴⁶³ PORTOGHESI, *Bernardo Vittone*, p. 103.

together with the interlaced ribbed dome to which it is adjoined, reveals Vittone's fascination, at a very early stage in his practice, with the bizarre and idiosyncratic character of Guarini's architecture.

The combination of perforated pendentive and interlaced ribbed dome owes much to the example to the Sindone. Unlike the Sindone, however, Vittone's parish church project features a traditional square crossing, with the perforated pendentive mediating the transition between the Guarinesque interlaced ribbed dome above and the Juvaresque Greek cross below. It is, however, a rather "abrupt and unhappy" transition, one that the perforated pendentive, for all its acrobatics, cannot freely or entirely facilitate. At any rate, Vittone must have found the solution unsatisfactory for he discarded it never to return to it. None of his "later transitions are so abrupt and Guarinesque or give such an impression of structural precariousness."⁴⁶⁴

Vittone also incorporated the perforated pendentive in his project for Santa Chiara at Alessandria, again in combination with an interlaced ribbed dome (Figure 4.49). It is a project that, unlike his earlier project for a parish church, was designed for a specific site. Moreover, its perforated pendentives were devised to meet a specific practical need. Vittone explains in *Istruzioni diverse* that he deliberately perforated the pendentive in order to provide for appropriate lighting, a provision made necessary, he says, since the proposed church was to have been erected within the pre-existing structure of a convent that lacked sufficient illumination.⁴⁶⁵ In this project Vittone abandoned the

⁴⁶⁴ POMMER, *Eighteenth-Century*, p. 114.

⁴⁶⁵ VITTORE, *Istruzioni diverse*, p. 184: "Cosa trovai pure in questo caso opportuna il fare aperte le Vele, per dare col mezzo di tali aperture al Vaso della Chiesa quel compimento di luce, che altronde procacciarvi restava affatto impossibile."

square crossing altogether, adopting instead a triangular-hexagonal plan inspired by, among other sources, the Sindone. It was the Sindone that also provided the model for the perforated pendentives themselves. Indeed, they are the same oval oculi as those that perforate the pendentives of Guarini's church.⁴⁶⁶ The oculi in Vittone's project, however, have no counterparts in the shallow semi-domes above the chapels as they do in the Sindone. Vittone also followed Guarini in vertically aligning the open pendentives of his church with tall windows in the drum above, an alignment that contributes to the increased illumination of the corners.

Something of how the perforated pendentives of Santa Chiara at Alessandria might have looked had the project been built may be seen in the much later church of San Luigi Gonzaga at Corteranzo Monferrato (1760; Figure 4.56). Once again, the perforated pendentives are combined with a triangular-hexagonal plan and an interlaced ribbed dome. But in this case the church stands on an isolated rural site unencumbered by other buildings and thus it is not necessary, as it was in the project for Santa Chiara at Alessandria, for the pendentives to be perforated in order that an adequate amount of light be admitted into the interior.

Vittone's designs for perforated pendentives remained on paper until 1740 when, for the first time, he was able to construct them in San Bernardino at Chieri (1740-44). Vittone specifically mentions these pendentives in his description of the church, boasting that their form, like the form of the dome, is different from the common style, and explaining that he opened up the pendentives for the same reason that he opened up the crowns of the semi-

⁴⁶⁶ WITTKOWER, "Vittone's Domes," p. 218.

domes, in order that light from the dome might be better diffused downward and the church brightened in a livelier manner.⁴⁶⁷ San Bernardino is a Greek cross in plan, a design fixed in place by the original architect who had preceded Vittone. Vittone was obliged to retain the plan and erect his perforated pendentives above a traditional square crossing of the sort he had proposed earlier for his parish church project. Unlike the pendentives of this earlier project, however, those of San Bernardino are not treated in the manner of squinches. And unlike them they are not an integral to the actual structure of the crossing. Instead, they are sham structures comprised of a brick sheathing separated from the spur wall behind that transmits the load, an arrangement comparable to that of the false pendentives of Guarini's San Lorenzo.⁴⁶⁸

The most telling difference between the pendentives of San Bernardino and those of his parish church project, however, is the manner in which they are illuminated. The pendentives of the earlier project are lighted directly by means of a boring punctured entirely through the masonry mass of the structure. It is a most fanciful and untenable solution, one that reveals an as yet uncritical consideration and appreciation of the structural problems involved in perforating the pendentive. The pendentives of San Bernardino, by contrast, are illuminated indirectly, not by a boring cut entirely through the

⁴⁶⁷ VITTORE, *Istruzioni diverse*, p. 182: "La Cupola, che sopra vi è eretta, e cui stimai tenere leggera, non poco scostasi nella sua forma dallo stile comune. Lo stesso è delle Vele, e delle Volte delle Cappelle, dell' Antipresbiterio, e dell' Ingresso, le quali tutte restano aperte, così che giù diffondendosi per esse il lume della Cupola, passa a rischiarire più vivamente la Chiesa."

⁴⁶⁸ POMMER, *Eighteenth-Century*, p. 114. Still, as Pommer notes, Vittone's pendentives have in their appearance little in common with Guarini's style since they "do not look unstable; they do not disjoin the area below from the vault; and they are not mere preparations for a towering vault."

structure, but by an aperture that punctures upward through the annular cornice until it opens onto the corner space of the drum to create in essence a light chamber. In this way Vittone succeeded in filling the pendentive with light while preserving its structural integrity.

Where conventional pendentives are closed and solid, Vittone's pendentives at San Bernardino are decidedly open and hollow and filled with light. As if to underscore this fact, stucco rays are made to protrude through the perforations of the pendentives just as they do through the perforations at the crowns of the dome and the semi-domes. As such they mark "the path ripped by light through the pendentives," giving visible expression thereby to the potential power of light to dissolve mass.⁴⁶⁹ The stucco rays also give expression, in their linear extension, to the vertical union between the upper zone of the dome and the lower zone of the spectator.⁴⁷⁰

The drum of San Bernardino is comprised of eight piers and eight arched openings with the openings aligned squarely on the cardinal and diagonal axes. The eight piers make up the drum proper, bearing directly upon the annular cornice below and supporting the octagonal cloister vault above. There are four additional piers, however, that bear not upon the annular cornice but upon the spur walls that mark the corners of the crossing itself.⁴⁷¹ They are positioned at the corner points beyond the central octagonal space of the drum, and as such they return the drum to a square form. The drum in effect takes on the geometry of both an octagon and a quadrangle

⁴⁶⁹ IBID., p. 115.

⁴⁷⁰ IBID., p. 115.

⁴⁷¹ IBID., p. 114, note 54 on p. 127.

simultaneously, and in so doing facilitates the structural and spatial transition from the octagonal dome to the square crossing.⁴⁷² The result is a blurring and overlapping of spatial boundaries characteristic of Vittone's openwork, scenographic architecture as a whole.

The corner piers of the drum support triangular segmental vaults that give definition to subsidiary corner spaces. Illuminated by windows, these subsidiary corner spaces function in fact as light chambers that channel light to the perforated pendentives below. In this they are comparable in function to the large light chambers that, opening off the drum on the cardinal axes, channel light to the rectangular vertex openings of the semi-domes below. Since the drum can be read as having either eight or twelve piers, its corner definition is ambiguous. In effect, the corner of the drum is defined simultaneously as curved and angled, closed and open. It is an ambiguous definition of the corner not unlike the ones that mark the corners of Plantery's atrium vaults, Juvarra's *salone* in the Villa Morra di Lavriano, and Michetti's vaulted room in the Palazzo Colonna overlooking the Piazza Venezia.

After completing San Bernardino at Chieri Vittone rarely again made use of the perforated pendentive in its pure form. It appears only twice after 1744, once in his original design for the church of the Certosa at Casotto (1754) and again in San Luigi Gonzaga at Corteranzo Monferrato (1760).⁴⁷³ Henceforth, Vittone would restrict his investigation to another type of open pendentive. It is the carved-out or hollowed-out pendentive, what Pommer

⁴⁷² PORTOGHESI, "Metodo e poesia," p. 103.

⁴⁷³ On the Certosa at Casotto, see VITTONI, *Istruzioni diverse*, pp. 175-177, pls. 51-52; OLIVERO, *Le opere*, p. 70; RODOLFO, "Notizie inedite," p. 452; S. FASSINI, *La Certosa, il castello e la tenuta di Valcasotto* (Turin, 1940); CARBONERI, "Architettura," in *Mostra del Barocco*, I, pp. 60-61, no. 157; PORTOGHESI, *Bernardo Vittone*, pp. 172-173, 225-226, fig. XXC, pl. 217; and CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 31, no. 64, figs. 115-118.

variously terms the “pushed-back,” the “gouged-out,” and the “scooped-out” pendentive,⁴⁷⁴ what Wittkower calls the “inverted squinch” and the “pendentive-squinch,”⁴⁷⁵ what Oechslin names the “excavated pendentive,”⁴⁷⁶ what Perogalli calls the “emptied pendentive,”⁴⁷⁷ and what Vittone himself refers to as the “*scavo delle vele*.”⁴⁷⁸ It is Vittone’s very own invention, perfected by himself, and constituting by all accounts “his most original — his one original — idea.”⁴⁷⁹ It is characterized by a deep concave groove that runs vertically from the bottom of the pendentive to the top, cutting away the annular cornice, and continuing into and fusing with the corner of the drum above. The hollowed-out groove is actually similar in form to the basin of a squinch.⁴⁸⁰ Even so, as Pommer points out, Vittone’s motif remains very much a pendentive, its original triangular-spherical shape admittedly gouged and distorted but nevertheless still recognizable.⁴⁸¹ These gouges of the

⁴⁷⁴ POMMER, *Eighteenth-Century*, p. 114, note 55 on pp. 127-128.

⁴⁷⁵ WITTKOWER, *Art and Architecture*, p. 430.

⁴⁷⁶ OECHSLIN, “Vittone e l’architettura,” p. 39, note 3, p. 47: “pennacchio scavato,” and “scavamento dei pennacchi.”

⁴⁷⁷ PEROGALLI, “Nota sull’architettura,” p. 886: “pennacchi svuotati.”

⁴⁷⁸ VITTORE, *Istruzioni diverse*, p.181.

⁴⁷⁹ POMMER, *Eighteenth-Century*, p. 114. The novelty and originality of Vittone’s idea of the hollowed-out pendentive is also discussed by WITTKOWER, *Art and Architecture*, p. 430; IDEM., “Vittone’s Domes,” pp. 220, 222; and OECHSLIN, “Vittone e l’architettura,” p. 39.

⁴⁸⁰ WITTKOWER, *Art and Architecture*, p. 430, interprets Vittone’s pendentive to be a special type of squinch: “Thus the medieval squinch, which had been swept away by the Renaissance and was revived by Borromini in some marginal works, found a strange resuscitation just before the close of a long epoch.”

⁴⁸¹ POMMER, *Eighteenth-Century*, p. 114, note 55 on pp. 127-128: “But these structures are spherical triangles. It is true that the scooped-out pendentives belong to the class of experiments, including the squinch, by which Borromini and Guarini had sought to free architecture from Roman conventions; but it is the essence of Vittone’s innovations that they are true pendentives in form...”

hollowed-out pendentives became in Vittone's hands "a witty play" on traditional architectural sensibilities and values.⁴⁸² Where the pendentive is traditionally treated as a sound and firm structural element, one that is essential to the structural stability of the dome, Vittone treated it as an unstable and compromised element that celebrates the precariousness of structure that Guarini had so admired in Gothic architecture.

Vittone first utilized the hollowed-out pendentive in the Chapel of the Purificazione di Maria Vergine in the Ospizio di Carità at Carignano (1744-49; Figures 4.110-4.111).⁴⁸³ In his treatise, Vittone limits his description of the Ospizio di Carità to the apartments and supporting rooms of the hospice surrounding the chapel, saying hardly anything at all about the chapel and absolutely nothing about the hollowed-out pendentives.⁴⁸⁴ The chapel is embedded within a building block, like Vittone's project for Santa Chiara at Alessandria, and one may presume that Vittone introduced the hollowed-out pendentive for the same reason that he earlier had introduced the perforated

⁴⁸² MILLON, "Vittone," *Architectural Review*, p. 101.

⁴⁸³ The Ospizio di Carità was commissioned by the banker Antonio Facio, the same client who several years earlier had commissioned Vittone to design the Sanctuary of the Visitazione at Vallinotto. The cornerstone of the Ospizio was laid on 19 March 1744. The first Mass was celebrated in the chapel on 20 March 1746, and the Ospizio was completed and opened to the poor on 16 November 1749. On the Ospizio di Carità and its chapel, see VITTONI, *Istruzioni diverse*, pp. 169-170; OLIVERO, *Le opere*, pp. 69-70, 110; BRICARELLI, "Bernardo Antonio Vittone," p. 235; BRINCKMANN, *Theatrum Novum*, p. 23, no. 43; RODOLFO, "L'architettura barocca," p. 139, pl. IX; PORTOGHESI, *Bernardo Vittone*, pp. 130, 222; PASSANTI, "Per Bernardo Vittone," pp. 14-15; LUSSO, *Carignano: i "luoghi pii"*, p. 302, illustrations on pp. 292, 299; ARDUINO, "Note su alcuni progetti vittoniani," pp. 27-32; GIUDICI/MEMOLI, *La architettura*, p. 291; CAVALLARI MURAT, "L'avventura neoguariniana," p. 491; and STARGARD, "Repression," pp. 119-158.

⁴⁸⁴ VITTONI, *Istruzioni diverse*, p. 170, states that one part of the chapel was reserved for outsiders and the other part for the inmates, with one section reserved for men and the other one, sited behind, for women: "...3. Atrio per disimpegno della Cappella, e degli Appartamenti d'ambi li Sessi. 4. Parte del sito della Cappella destinata per gli Esteri. 5. Altra parte di detto sito destinata per gli Uomini. 6. Sito dietro essa Cappella destinato per le Donne."

pendentive in his Santa Chiara project, to increase the illumination in the chapel interior.

Vittone's hollowed-out pendentive in the chapel of the Ospizio di Carità at Carignano takes as its immediate point of departure the perforated pendentive of San Bernardino. In fact it is very much the same pendentive as the one at Chieri, but with the sheathing fully stripped away to expose the cavity inside.⁴⁸⁵ Thus what is implicit and only partly visible at San Bernardino — the vertical hollow groove connecting the pendentive to the corner space of the drum — is made explicit and fully manifest at the Ospizio di Carità. The stripping away of the pendentive sheathing is matched by the general elimination of multiple shells and false screens throughout the interior, a simplification of structure that, occurring during the mid-1740s, marked the advent of Vittone's mature style.

The dome of the chapel in the Ospizio di Carità, like the dome of San Bernardino, is a conventional closed shell without interlaced ribs. It is not perforated, not even by a vertex opening, nor is it endowed with a particularly open character to match the airy, cage-like quality that characterizes the pendentives and drum. It is as though Vittone, for the sake of husbanding his effort, purposely limited opening up the structure to the areas of the pendentives and the drum. The drum is comprised of eight piers that bear upon the annular cornice that, in turn, has been severely carved away at the corners. This was the key to Vittone's success in generating the hollowed-out pendentive — he reduced the drum to a cage-like, skeletal structure that

⁴⁸⁵ The derivation of Vittone's mature hollowed-out pendentive from the earlier perforated pendentive of San Bernardino at Chieri is discussed by PORTOGHESI, "Metodo e poesia," pp. 103, 106; IDEM., *Bernardo Vittone*, p. 130; and CAVALLARI MURAT, "L'avventura neoguariniana," p. 491.

distributes the load through a few point supports. He removed the point supports away from the corners of the drum, freeing the corners to receive windows positioned directly above the pendentives and thereby releasing the pendentives from the need to bear the load of the dome and drum.⁴⁸⁶ It is similar to the solution employed at San Bernardino at Chieri, but where the annular cornice supporting the Chieri drum remains continuous and unbroken, the one supporting the Carignano drum is disrupted by the deep cavities generated by the pendentives. Even so the moulding that defines the top edge of the Carignano annular cornice remains intact, wrapping itself continuously around the hollowed-out cavities of the pendentives.

At Carignano the hollowed-out pendentives and the open corner bays of the drum produce an effect of bright luminosity and vertical integration of structure and space. The hollowing out of the pendentive opens up “entirely new possibilities of pouring light into domes.”⁴⁸⁷ It facilitates the diffusion of light that enters from windows positioned on the corners of the drum. The result is an intensified brightening of the corner that serves to underscore its open character. Also, the hollowed-out pendentive is indissolubly fused with the drum and dome into a single structure in a “hitherto unknown unification” of elements, a vertical continuity of structure and space that serves to distinguish Vittone’s open pendentive from that of Guarini’s.⁴⁸⁸

⁴⁸⁶ WITTKOWER, *Art and Architecture*, p. 430, concludes that Vittone’s *scavo delle vele* makes the open drum possible by facilitating the transition of the octagonal arrangement of piers to the square geometry of the crossing. However, POMMER, *Eighteenth-Century*, p. 114, note 55 on p. 128, argues that just the opposite is true, that it is the skeletal structure of the dome that makes possible the false pendentives.

⁴⁸⁷ WITTKOWER, “Vittone’s Domes,” p. 220.

⁴⁸⁸ IDEM., *Art and Architecture*, p. 430; IDEM., “Vittone’s Domes,” p. 220; POMMER, *Eighteenth-Century*, p. 115.

Vittone also incorporated the hollowed-out pendentive in the presbytery of Santa Maria di Piazza in Turin (ca. 1751-54), begun soon after the chapel of the Ospizio di Carità at Carignano was completed (Figures 4.112-4.113).⁴⁸⁹ Once again Vittone was faced with difficult site constraints — the presbytery was enclosed on two sides by pre-existing buildings that obstructed the flow of light. And so, as he explains in his treatise, it was necessary to increase the amount of light in what would otherwise have been a dark interior.⁴⁹⁰ Toward that end Vittone arranged the parts of the church so

⁴⁸⁹ See PORTOGHESI, “Metodo e poesia,” p. 106, who argues that it was in Santa Maria di Piazza that Vittone employed the hollowed-out pendentive for the first time, noting that Vittone specifically mentions the *scavo delle vele* in his description of the church in *Istruzioni diverse*. But see also IDEM., *Bernardo Vittone*, p. 130, where Portoghesi changes his position and concludes that the hollowed-out pendentive first occurred in the chapel of the Ospizio di Carità at Carignano. According to O. DEROSI, *Nuova guida per la città di Torino* (Turin, 1781), p. 45, a source I was unable to consult, Santa Maria di Piazza was “fatta nel 1751,” but see POMMER, *Eighteenth-Century*, p. 115, note 60 on p. 128, who believes, however, that this date refers to the nave and not to the presbytery which apparently had been erected earlier since already in 1748 Pietro Francesco Guala had received the commission for the painting of the main altar. Pommer also notes that Vittone himself states that the presbytery was built before the nave, pointing to his passage in *Istruzioni diverse*, p. 180: “Osservare si possono in questo corpo di Chiesa fra loro insieme accordati due diversi Prodotti, cioè il Presbiterio, che fu il primo, ed il corpo rimanente della Chiesa, che fu il seconda.” On this basis, MILLON, “La formazione,” p. 446, proposes a commencement date of 1745 for the presbytery of Santa Maria di Piazza, which would make it contemporary with the chapel of the Ospizio di Carità at Carignano. On Santa Maria di Piazza and its hollowed-out pendentives, see also OLIVERO, *Le opere*, pp. 86-87; BRICARELLI, “Bernardo Antonio Vittone,” p. 235; BRINCKMANN, *Theatrum Novum*, pp. 72-73; PORTOGHESI, *Bernardo Vittone*, pp. 131-132, 225, no. 29; ANDEREGG-TILLE, *Schule Guarinis*, pp. 34-37; CARBONERI, “Architettura,” in *Mostra del Barocco*, I, p. 60, no. 156; CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 30, no. 62, figs. 102-104; TAMBURINI, *Le chiese*, pp. 375-384; WITTKOWER, *Art and Architecture*, p. 430; MILLON, “Vittone,” *Architectural Review*, pp. 102-103; POMMER, *Eighteenth-Century*, p. 128; GIUDICI/MEMOLI, *La architettura*, p. 296-299; CAVALLARI MURAT, “L’avventura neoguariniana,” p. 491; TAVASSI LA GRECA, *Bernardo Antonio Vittone*, pp. 36-37; F. CERESA, “Disegno e geometria nel Barocco in Piemonte. La chiesa di Santa Maria di Piazza in Torino. Geometrie formali e geometrie percettive,” in *La rappresentazione dell’architettura e dell’ambiente*. Vol. 3, *Principe costitutivi del progetto tra artificio e natura* (Rome, 1998), a source I was unable to consult; and BENEDETTO/BENEDETTO, *La luce ha mani*, pp. 66-71. See also OECHSLIN, “Vittone e l’architettura,” p. 49, figs. 4-a, 4-b, who compares the hollowed-out pendentive at Santa Maria di Piazza to those of Gianfrancesco Buonamici’s church of Santa Giustina at Ravenna (1747-50).

⁴⁹⁰ VITTONI, *Istruzioni diverse*, pp. 180-181: “Imperocchè, per accrescere il lume, che troppo era scarso nello stato, in cui di prima si trovava questa Chiesa, determinata essendosi soltanto già la riforma del Presbiterio col di lui alzamento mandossi questa ad effetto giusta il Disegno, che quivi vedesi espresso; nel qual caso non sendovisi, atteso gl’ impedimenti, che esternamente vi erano, potuto altronde procacciare, che ben poca, la luce, d’uopo fu quella

that the lighting of the whole would be effectively and evenly obtained.⁴⁹¹

Vittone singles out the hollowed-out pendentive, telling us that he devised it in order that light might be channeled downward from the windows of the dome and be more freely diffused in a manner that better illumines the presbytery.⁴⁹² Vittone's purpose in gouging out the pendentives then is made explicit — to increase the quantity and enhance the quality of illumination.

The presbytery vault of Santa Maria di Piazza is a closed and conventional structure, with eight ribs converging toward an oculus at the crown surmounted in turn by a lantern. The drum, or rather "dwarf drum," is a more open structure, with twelve windows, three to each side. Eight squat piers support the eight ribs of the dome, and four additional piers, thinner than the others, occupy the corners for a total of twelve piers to the drum. The result is a cage-like construction, whose extensive glazing and vertical continuity of elements is again suggestive of Gothic architecture.

The drum is simultaneously quadrangular and octagonal in plan in yet another variation of the type introduced at San Bernardino and subsequently refined at the chapel of the Ospizio di Carità at Carignano. The transition from the square to the octagon, and back again to the square, is facilitated by the hollowed-out pendentive that interrupts the annular cornice at the

prendere dalla parte di mezzogiorno, per cui esso Presbiterio riguarda il rimanente corpo di Chiesa, disponendovi quivi tre grandi Finestre."

⁴⁹¹ IBID., p. 181: "...ed in tale occasione, affine di dar a questo, per quanto era possibile, nè toglier al Presbiterio la conveniente sua luce, pensai a disporne le parti nel modo, che espresso ivi si vede."

⁴⁹² IBID., p. 181: "Rendesi quivi fra il resto principalmente notabile lo scavo delle vele del Presbiterio a motivo del passaggio, o sia apertura, ch' egli dà al lume, che vi s'intromette per le Finestre della Cupola; per cui ne segue, che meglio esso lume si può, e più liberamente abasso diffondere, e meglio così rischiarire il detto Presbiterio." On this passage, see also MILLON, "Vittone," *Architectural Review*, p. 101.

corners.⁴⁹³ Here, however, the circle of the annular cornice, which is continuous at San Bernardino and disrupted but still recognizable at the chapel of the Ospizio di Carità, is eroded further still. Yet, while the annular cornice is carved away at the corners, the cornice moulding itself is not, but wraps itself uninterrupted around the concave gouges of the pendentives.

Vittone also incorporated the hollowed-out pendentive in his remodeled presbytery of Sant'Antonio Abate in Turin (*ca.* 1750, demolished 1830), this time in combination with an interlaced ribbed vault (Figure 4.52).⁴⁹⁴ Vittone explains that the pre-existing interior of Sant'Antonio Abate was almost totally devoid of light due to external encumbrances, and that it was on account of the need to better illuminate the interior that he reconstructed the presbytery.⁴⁹⁵ The thinness of the existing walls and the impossibility of making them thicker, given the narrowness of the site, led Vittone to devise a lightweight and elegant dome that, on the one hand, did not burden the walls with excessive weight and, on the other, facilitated the desired lighting.⁴⁹⁶ And while Vittone does not say anything about the hollowed-out pendentive

⁴⁹³ See IBID., p. 101. The presbytery is attached to a nave that is capped by its own dome on pendentives. These pendentives, however, are conventional in form and thus serve as a foil to the more daring and innovative pendentives of the presbytery.

⁴⁹⁴ On the hollowed-out pendentives of Sant'Antonio Abate, see PORTOGHESI, "Metodo e poesia," pp. 106-107; IDEM., *Bernardo Vittone*, p. 133; TAMBURINI, *Le chiese*, pp. 372-373; and CAVALLARI MURAT, "L'avventura neoguariniana," p. 491.

⁴⁹⁵ VITTONI, *Istruzioni diverse*, p. 182: "La privazione totale di luce, in cui già si trovava il Presbiterio; e la poca, che ne godeva il Vaso della Chiesa a cagione degl' impedimenti esteriori, furono i motivi, per i quali si progettò tale riforma..."

⁴⁹⁶ IBID., pp. 182-183: "...nell' estettuazione del che, atteso la tenue grossezza, che vi si aveva de' muri della vecchia Chiesa, de quale d'uopo era servisi per la nuova, e l'angustia del sito, la quale non permetteva guari maggiore ne' luoghi opportuni il loro ingrossamento, affine di non caricare di soverchio peso quella Fabrica, pensai dovermi, nel disporne la Cupola, valere della maniera, che ivi osservasi, con cui, oltre la bramata luce, conseguire insieme potessi, e la leggiadria della forma, e la leggerezza dell' Opera."

itself, there can be no doubt that he introduced it to lighten the load on the pre-existing walls and to increase the amount of light entering the interior.

The hollowed-out pendentives of Sant'Antonio Abate supported an open, cage-like drum comprised of twelve piers, eight that supported the ribs of the dome, and four that occupied the corners, in an arrangement that is simultaneously quadrangular and octagonal in plan. The piers themselves were reduced to exceptionally slender and attenuated members as most of the wall surface was given over to glazing, twelve large windows in all, with three to each side of the drum. In its arrangement of piers and windows, the drum of the Sant'Antonio Abate presbytery closely resembled those of the presbytery of Santa Maria di Piazza and the chapel of the Ospizio di Carità. However, it was proportionately taller, and its piers proportionately thinner, than the drums of either earlier structure. Moreover, its windows were not all the same size and shape. The windows of the corner bays were slightly more elongated, by means of their dropped sills, than those of the cardinal bays. The increased height given to the corner windows of the drum served to further accentuate the openness of the corner bays.

Not only were the pendentives and drum of the Sant'Antonio Abate presbytery characterized by a skeletonization of structure, so too was the dome. The hollowing out of the pendentives and the glazing of the drum were combined with an osseous vault in an arrangement that was integrated and unified. Vittone thereby achieved a tight vertical continuity of structure that bound pendentives, drum, and dome into a single indivisible whole. It is as though, having mastered the new pendentive type, Vittone returned to the open vault of his early work to create a cohesive, skeletal ensemble. As such the presbytery of Sant'Antonio Abate marked the culmination of an idea —

the opening up of the corner with the interlacing of ribs — first suggested by Borromini and advanced by Guarini.⁴⁹⁷ It also represents, as Pommer observes, a synthesis of Guarinesque and Juvaresque architectural themes.⁴⁹⁸

In 1755 Vittone produced another version of the hollowed-out pendentive as part of his reconstruction of the crossing of Santi Pietro e Paolo at Mondovì Breo (Figures 4.114-4.115).⁴⁹⁹ This pendentive is practically the same version as the pendentive of the presbytery of Santa Maria di Piazza in Turin, that is to say it is scooped out with a deep groove that forms a vertical continuity with the corner bay of the drum above.⁵⁰⁰ The drum is comprised of eight stubby piers faced with pilasters that support the dome proper, and four more piers positioned at the corners of the crossing and capped by their own triangular segmental vaults. In other words, the drum is simultaneously a square and octagon in plan, exactly like the drums of San Bernardino at Chieri and the presbyteries of Santa Maria di Piazza and Sant'Antonio Abate in Turin.

The intrados of the dome, however, is distinguished by its continuously smooth surface, disrupted only by the eight shallow lunettes that cut away the dome at its base. The crown itself is not punctured by an oculus but remains

⁴⁹⁷ OECHSLIN, "Vittone e l'architettura," p. 48.

⁴⁹⁸ POMMER, *Eighteenth-Century*, p. 115, note 62 on p. 129: "It [Sant'Antonio Abate] wove Juvaresque ribs in a Guarinesque basket pattern, and was one of the best examples of the interchangeability of such structures."

⁴⁹⁹ The original church dates to the fifteenth century. On Vittone's hollowed-out pendentives at Santi Pietro e Paolo at Mondovì Breo, see L. BERTONE, *Due chiese di Breo: la parrocchiale dei Santi Pietro e Paolo e la chiesa di San Filippo Neri a Mondovì* (Mondovì, 1991); A. GRISERI, P. DELL'AQUILA, and A. GRISERI, *Un cantiere dopo la Guerra del Sale, Francesco Gallo 1672-1750* (Farigliano, 1995); and *Una comunità dal medioevo all'età moderna. La chiesa dei Santi Pietro e Paolo in Mondovì* (Mondovì, 1998), pp. 137, 323-325, 333, figs. 8, 12.

⁵⁰⁰ POMMER, *Eighteenth-Century*, p. 115, note 64 on p. 129.

wholly closed and intact, its surface given over to a nineteenth-century fresco depicting *The Triumphal Ascent of St. Joseph*.⁵⁰¹ In other words, the light that enters the crossing of Santi Pietro e Paolo enters entirely through the drum and not through the dome. Vittone gives the corner walls of the drum over almost entirely to glazing, a dissolution of mass that finds its counterpart in the hollowing out of the pendentives immediately below. The corners of the drum are angled with two windows set at right angles to one another, a solution that again recalls those of Santa Maria di Piazza and Sant'Antonio Abate and ultimately San Bernardino at Chieri. However, at Mondovì Breo the corner windows of the drum are noticeably taller than the lateral windows. Thus what is barely noticeable at Sant'Antonio Abate — the increase in the height of the corner windows vis-à-vis the lateral windows — is unmistakably plain at Santi Pietro e Paolo. The corner windows are differentiated from the lateral ones not only in size but also in shape. They are elongated rectangles with rounded terminations at both top and bottom while the lateral windows by contrast are small round oculi. As such the corner windows extend both higher and lower than the lateral ones. Thus light entering the drum is brightest at the corners.

The consummate version of Vittone's hollowed-out pendentive was reached in Santa Croce (now Santa Caterina) at Villanova di Mondovì (1755).⁵⁰² It is a particularly innovative solution in which the original shape of the pendentive is no longer recognizable. In fact the pendentive has been so

⁵⁰¹ The dome fresco was painted in 1891 by Luigi Morgari; see *comunità dal medioevo*, p. 344, fig. 12.

⁵⁰² On Santa Croce at Villanova di Mondovì, see N. CARBONERI, *Un gioiello architettonico a Villanova Mondovì. La chiesa parrocchiale di Santa Caterina* (Mondovì, 1950).

completely hollowed out, the area of its cavity so extensively broadened and widened, that it becomes impossible to determine where it begins and where it ends (Figures 4.116-4.117). All vestiges of the annular cornice, the pendentive, and the drum are eliminated and merged “into an indivisible whole” with the crossing arches below and the dome above.⁵⁰³ Not only the annular cornice, but also the cornice moulding that customarily defines its top edge is eliminated (there is, however, a string-course in the zone above that sweeps continuously around, bisecting the jambs of the windows of the drum). Consequently, the traditional definitions of crossing arch, pendentive, annular cornice, drum, and dome as distinct entities have lost their meaning.⁵⁰⁴ Vittone’s purpose was to unite the dome directly to the crossing, without intermediary elements, and thereby to occasion a marked spatial unification, one that is characterized by an emphatic vertical continuity of line.⁵⁰⁵ The fusion of crossing arches, pendentive, annular cornice, drum, and dome also entails an entirely novel way of transforming the square geometry of the crossing below into the octagonal geometry of the drum and dome above.⁵⁰⁶ In this case, however, the corner bays of the drum are not angled but beveled. The windows that penetrate the drum at the corners are both higher and lower than those that penetrate it on the sides, with the corner windows formed by elongated rectangles rounded at top and bottom and the lateral windows formed by small oculi. The pendentive at Santa Croce is actually a

⁵⁰³ WITTKOWER, *Art and Architecture*, p. 430.

⁵⁰⁴ IDEM., “Vittone’s Domes,” p. 222.

⁵⁰⁵ POMMER, *Eighteenth-Century*, p. 115.

⁵⁰⁶ WITTKOWER, *Art and Architecture*, p. 430.

hybrid structure, as much a squinch as a pendentive. Vittone explains in his treatise that he devised it in order to satisfy the stated desire of the Confratelli Disciplinanti at Villanova di Mondovì for both novelty and charming playfulness but without incurring too much expense.⁵⁰⁷ Vittone does not mention light nor does he mention unity of structure, and yet these concerns must have weighed on his mind as he designed the pendentive.⁵⁰⁸

In developing the open pendentive Vittone was influenced primarily by the example of Guarini's Sindone in which the open pendentive is closely related to an interlaced ribbed vault. Likewise, in Vittone's architecture there exists a close relation between the open pendentive and the interlaced ribbed dome. Vittone's earliest designs to incorporate the open pendentive — both the projects for a parish church “in some very conspicuous place” and Santa

⁵⁰⁷ VITTONI, *Istruzioni diverse*, pp. 181-182: “Il desiderio, che gli stessi Confratelli avevano, che formato venisse loro un Vaso dotato di novità, e di scherzosa vaghezza, senza però che fosse per riuscir loro di troppo sensibile dispendio, fu il motivo, che m'indusse a lasciar da parte ogni sorta Cupola, e Bacile, ed escogitare l'idea, che quivi vedesi espressa. Giovar può fra il resto ivi osservare l'interruzione, che fatta si è delle Vele, per formare que' scavi quasi in forma di Nicchioni...”

⁵⁰⁸ Another Vittonian church, the destroyed parish church of Santa Maria Maggiore at Mondovì Breo (reconstruction begun 1748, presbytery 1758-60, bombed during World War II and subsequently razed), featured a variation on the open pendentive of the type introduced at Santa Croce at Villanova di Mondovì. As at Santa Croce the original shapes of the pendentive and the annular cornice were not recognizable, but were completely fused with that of the crossing arches and the drum; see WITTKOWER, “Vittone's Domes,” fig. 296; and POMMER, *Eighteenth-Century*, fig. 181. The attribution of Santa Maria Maggiore to Vittone was first made by OLIVERO, *Miscellanea di architettura*, pp. 17, and subsequently accepted by WITTKOWER, “Vittone's Domes,” p. 222, and PORTOGHESI, *Bernardo Vittone*, p. 235. However, POMMER, *Eighteenth-Century*, p. 115, note 63 on p. 129, rejects the attribution, noting that details of the building's structure and ornament have little in common with Vittone's *oeuvre*, particularly the rather small windows and the entablature of the drum that divides it into two tiers in contradiction to the general tendency towards ample fenestration and vertical unification typical of Vittone's domed churches. Pommer also notes that none of the voluminous records related to the destroyed church mention Vittone, but mention instead an Abbot Trona (for the drawings) and Andrea Scala (for the construction). Pommer concedes the possibility that Trona and Scala may have altered a project submitted by Vittone, but he nevertheless concludes that the absence of both Vittone's name from the records and his style from the building suggests instead that it was Trona and Scala who were solely responsible for the commission for which they merely imitated Vittone's work in Turin and Carignano.

Chiara at Alessandria — also incorporate an interlaced ribbed dome, an indication that Vittone's initial conception of the open pendentive was closely tied up with, and developed out of, his idea of the interlaced ribbed dome. Indeed, the interlaced ribbed dome possesses certain structural qualities that make it especially compatible with the open pendentive. In particular, it is a skeletal structure that channels load through point supports rather than through a continuous support. Vittone was cognizant of this structural property and exploited it to open up the corner. He removed the springing points of the ribs to either side above the pendentive, away from the corner, thereby freeing the pendentive from its traditional burden to bear load. This allowed him to perforate or hollow out the pendentive without compromise to its structural integrity. Likewise, he was able to open the corner of the drum above the pendentive to receive windows.

This stands in marked contrast to the practice of other Neo-Guarinian architects of the time, notably Filippo Giovanni Battista Nicolis di Robilant and Giuseppe Gerolamo Buniva, who preferred to combine the interlaced ribbed vault with the conventional, closed pendentive. In this they were inspired no doubt by Guarini's presbytery of San Lorenzo in which the pendentives, which here are not open but closed in the conventional manner, are made to support the springing of the vault's ribs in a manner that closes off the corners (Figures 4.6-4.7). This was the model for Nicolis di Robilant's presbytery vaults in the Misericordia in Turin (Figures 4.26-4.27) and San Giovanni at Nice (Figure 4.28) and for Buniva's presbytery vault in San Grato at Piscina (Figures 4.29-4.30): the springing of ribs bears directly upon conventional pendentives to close off the corner. Vittone, in contrast, looked to another Guarinian model, namely the main domes of San Lorenzo and the

Sindone. Here Guarini arranged the drum in a manner that a window, and not the springing of ribs, is vertically aligned with the pendentive below. The result is an open corner that, in the case of the Sindone, allows for the perforation of the pendentive.

It will be recalled that in his project for a parish church “in some very conspicuous place,” Vittone designed the perforated pendentive to support, not an aperture, but the springing of the interlaced ribs that support dome. Moreover, the boring itself punctures entirely through the critical mass of the pendentive. The contradiction involving statics became immediately apparent. For if the pendentive were to be perforated, then it is untenable that it should also bear a load. Vittone must have recognized this and taken a second, closer look at the Sindone, for henceforth he would align the open pendentive with a window in the drum above. This is the solution that he adopted for all his subsequent designs. Never again would he align a perforated pendentive with the springing of ribs. And so in his project for Santa Chiara at Alessandria and its derivative, San Luigi Gonzaga at Corteranzo Monferrato, and in his presbytery of Sant’Antonio Abate in Turin, Vittone positioned the pendentive directly under the corner window of the drum. Likewise, in his designs for vaults without interlaced ribs — i.e., his vaults for the chapel of the Ospizio di Carità at Carignano, the presbytery of Santa Maria di Piazza in Turin, the reconstructed crossing of Santi Pietro e Paolo at Mondovì Breo, and Santa Croce at Villanova di Mondovì — Vittone aligned the open pendentive with windows in the drum. These vaults are comprised not of interlaced ribs, but of ribs that converge toward the oculus at the crown. Still, at their springing, the ribs are themselves positioned in

precisely the same way as they are in the interlaced ribbed vault, in a manner that leaves the corner free and open.

Mario Ludovico Quarini, Vittone's assistant and collaborator, also combined the hollowed-out pendentive with a interlaced ribbed vault in the presbytery of San Giacomo at Balangero (Figure 4.32), but in a manner that fails to generate the open character so typical of Vittone's pendentives. Quarini imitates Vittone's hollowed-out pendentive, but not to the point of combining and aligning it with a window in the drum as Vittone was wont to do. The corner above Quarini's pendentive is not open and glazed, but closed and walled in. In this respect it is closer in its effect to the pendentives of Nicolis di Robilant and Buniva than to those of his own master. Whether wittingly or not, Quarini misread Vittone's architecture even as he proposed to imitate it.

In developing the open pendentive Vittone was influenced also by the example of the Planterian vault which, like the interlaced ribbed vault, channels load through point supports in a manner that opens up the corner.⁵⁰⁹ Its corner section is characterized by an ambiguous delimitation of angled and curved fields of space that anticipates Vittone's hollowed-out pendentive. Vittone himself designed a number of Planterian vaults, including the atrium vault in the Palazzo Giriodi at Costigliole Saluzzo (1740; Figure 4.118) erected the same year that San Bernardino at Chieri was begun,⁵¹⁰ and the sacristy

⁵⁰⁹ The influence of Plantery's atrium vaults on Vittone's development of the hollowed-out pendentive is discussed by PORTOGHESI, "Metodo e poesia," p. 103; POMMER, *Eighteenth-Century*, p. 114; CAVALLARI MURAT, "Aggiornamento," pp. 538-539, figs. 40-43; and OECHSLIN, "Vittone e l'architettura," p. 47, note 3.

⁵¹⁰ On Vittone's Planterian vaults in the Palazzo Giriodi, see E. OLIVERO, "Sopra alcune architettura di Bernardo Vittone," *Bollettino della Società Piemontese di Archeologia e Belle Arti* VIII:1-2 (January-June 1924), pp. 12-16, here p. 13, pl. III; CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 58, no. 143; PORTOGHESI, *Bernardo Vittone*, pp. 159-161, 220, pl. 87;

vault in Santi Martiri in Turin (ca. 1751; Figure 4.119).⁵¹¹ He also designed a Planterian vault for one of his villa projects published in *Istruzioni elementari*.⁵¹² Finally, Vittone designed Planterian vaults for the sacristies of San Benigno di Frutturaria Canavese (1770-76; Figure 4.120)⁵¹³ and Santi Pietro e Paolo in Mondovì Breo (1771; Figure 4.121), both completed after his death, the latter for the same church for which, years earlier, he had introduced hollowed-out pendentives in his reconstruction of the crossing bay.⁵¹⁴

CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 21, no. 28; GABRIELLI, *Arte nell'antico*, pp. 26, 199 (bottom figure); and CAVALLARI MURAT, "L'avventura neoguariniana," p. 492.

⁵¹¹ Cavallari Murat was the first to note the Planterian character of the sacristy vault of Santi Martiri and to attribute the vault to Plantery (IDEM., "Gian Giacomo Plantery," p. 342, fig. 38 on p. 334), but later (IDEM., "Aggiornamento," pp. 492-493, fig. 43; IDEM., "L'avventura neoguariniana," p. 492) he came to accept the suggestion proposed by POMMER, *Eighteenth-Century*, p. 112, note 41 on p. 126, that the sacristy vault is the work of Vittone. Portoghesi's suggestion has also been accepted by CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 40, no. 109. See also MOCCAGATTA, "Bernardo Antonio Vittone," pp. 40-41, figs. 4, 8; IDEM., "La chiesa dei Santi Martiri," (1971-72), p. 97, fig. 23; IDEM., "La chiesa torinese," p. 35, and IDEM., "La chiesa dei Santi Martiri," (1978-80), p. 61, note 48, who points to a drawing by Mario Ludovico Quarini rendered before 1776, and today conserved in the Museo Civico in Turin, that depicts a plan of the church of Santi Martiri with sacristy with a caption that reads: "pianta della Chiesa de PP. Gesuiti con Sagristia, e parte del Convento. / L'architettura della Chiesa è di Pellegrino Pellegrini. La Sacrestia ed ornati di marmo di Bernardo Vittone. / La pittura della volta da padre Pozzi Gesuita," and to a notice from the register of manuscripts in the Jesuit archives that states that the sacristy was equipped with "pedestalli di marmo" in 1751. According to Moccagatta, the "ornati di marmo" mentioned in the one document and the "pedestalli di marmo" mentioned in the other are one and the same, a strong indication that Vittone was responsible for the sacristy vault. See also SIGNORELLI, "La chiesa dei SS. Martiri," p. 255; CANAVESIO, "Inediti vittoniani," p. 171, note 7; IDEM., "Presenze gesuitiche," p. 269, note 1; and IDEM., *Piemonte Barocco*, p. 135. The sacristy vault of Santi Martiri also displays close stylistic similarities to Vittone's vault of San Gaetano at Nice (1744-49), with which it is nearly contemporary, further indication of Vittone's authorship; see MOCCAGATTA, "Bernardo Antonio Vittone," pp. 45-46, figs. 8-9; and IDEM., "La chiesa dei Santi Martiri," (1971-72), p. 97, note 83.

⁵¹² VITTORE, *Istruzioni elementari*, pl. 86. See also PORTOGHESI, *Bernardo Vittone*, p. 169, fig. LXXV.

⁵¹³ See CAVALLARI MURAT, *Tra Serra d'Ivrea*, p. 377, fig. 10 [VII, 4]; and VIOLA, *L'Abbazia di Frutturaria*, fig. 4 (top right corner on un-numbered page [p. 239]). The monastic complex of San Benigno was completed by Quarini.

⁵¹⁴ The sacristy vault of Santi Pietro e Paolo in Mondovì Breo was begun and completed after Vittone's death by the master mason, Andrea Scala, after a probable design by Vittone; see *comunità dal medioevo*, pp. 138-139, 341, fig. 28.

THE OPENWORK DOME AS SACRED THEATER:
ILLUMINATION AND ILLUSION IN THE CENTRALLY PLANNED
CHURCHES OF BERNARDO ANTONIO VITTONI
Volume II

A Dissertation
Presented to the Faculty of the Graduate School
of Cornell University
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by
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CHAPTER FIVE

THE VITTONIAN DOME AS SACRED THEATER

Illusionistic Ceiling Fresco as Sacred Theater and Its Translation into the Openwork Vault

Illusionistic Ceiling Fresco as Sacred Theater

Illusionistic ceiling fresco, or *quadratura*, is the art of painting architectural scenes in foreshortened perspective on ceilings and walls in a manner that illusionistically extends the real space of a room into a fictive space beyond. *Quadratura* has its origins in Italy in the late fifteenth and early sixteenth centuries,¹ but it was not until the second half of the sixteenth century, particularly in Bologna, that the genre came into its own. During the age of the Baroque, *quadratura* painting came to evoke visions of celestial glories complete with the use of *chiaroscuro* and figures overlapping the picture frame to increase the illusion of spatial extension. As such, it became closely associated with the theatrical arts. In short, *quadratura* painting came to function as a type of sacred theater in much the way that the contemporary *apparato* erected for the *Quarant'ore* devotion did, the one medium a permanent two-dimensional image fixed upon a vaulted or mural surface and the other one a temporary three-dimensional fabrication of scenic wings erected in a church presbytery.

¹ See WITTKOWER, *Art and Architecture*, p. 65. Early examples include Andrea Mantegna's frescoed ceiling in the Camera degli Sposi in the Ducal Palace at Mantua (1474) and the frescoes in the Sala della Colonne of Baldassare Peruzzi's Villa Farnesina in Rome (ca. 1516). On *quadratura* painting in Italy, see also I. SJÖSTRÖM, *Quadratura: Studies in Italian Ceiling Painting* (Stockholm, 1978).

Quadratura, like the *apparato* for the *Quarant'ore* devotion, depends for its effect upon forced perspectival constructions. Consequently, a thorough knowledge of the theory and practical application of perspective was required of the *quadraturista* who painted the ceiling. Indeed, many *quadraturisti*, in addition to having painted ceiling frescoes, also designed *apparati* for the *Quarant'ore* devotion since the same mastery of perspective that was applied to the one medium was readily applied to the other. For example, in Rome Pietro da Cortona designed an *apparato* for the *Quarant'ore* devotion in San Lorenzo in Damaso (1633), the same year that he began painting his celebrated ceiling fresco in the *gran salone* of the Palazzo Barberini (1633-39). A comparison of the two works is instructive.² Both were commissioned by the Barberini, and both depicted a celestial glory, *The Glory of Paradise* in the one and *The Triumph of Divine Wisdom* in the other, with figures of saints, clouds, and rays of light overlapping the frame and visually spilling into the spectator's space. The spilling out of clouds and luminous rays serves in the fresco to visually integrate the vault and lower room of the *gran salone* of the Palazzo Barberini just as, in the case of the *apparato*, it also served to integrate the choir and nave of San Lorenzo in Damaso, the one integration occurring in the vertical plane and the other in the horizontal plane. Mark Weil observes:

The theatre of the Forty Hours is important for the history of baroque art because illusions such as those created by Pietro da Cortona in the *salone* of the Barberini Palace, Gian Lorenzo Bernini in the *Cathedra Petri*, and Giovanni Battista Gaulli in the vault of the Gesu are related to and in some ways dependent upon contemporary *apparati*.³

² See WEIL, "Devotion," pp. 230-231.

³ *IBID.*, pp. 219-220.

And:

The ease with which figures and clouds have penetrated earthly space is matched only by his drawing for the theater of the Forty Hours. The vision created by Pietro da Cortona in the Barberini Palace may have had as great an influence on the theatre of the Forty Hours as that theatre had on the conception of the fresco.⁴

The formula that Cortona established for the *apparato* in San Lorenzo in Damaso — a pictorial tableau composed of allegorical figures with an emphasis put on the narrative content — is the same one that he used for the ceiling fresco in the Palazzo Barberini. In both *apparato* and ceiling fresco Cortona emphasized figural at the expense of architectural representation. Groupings of figures and clouds dominate; the architectural framework is secondary. Indeed, the *quadratura* represented in the Palazzo Barberini fresco only serves to frame and accentuate the narrative action; it does not optically expand and extend the field of the vault.⁵ In other words, Cortona accomplished the perspectival diminution in his ceiling fresco, as he had in his *apparato*, less by geometrical means than by aerial ones, less by architectural representation than by figural arrangement.

The two media, *quadratura* painting and the *apparato* for the *Quarant'ore* devotion, followed parallel lines of development during the course of the seventeenth century. Cortona's formula of the 1630s for both media, in which the figural representation was emphasized over the architectural setting, began to give way by the 1680s to a new formula in which the architectural setting was increasingly emphasized at the expense of the figural

⁴ IBID., pp. 231-232.

⁵ WITTKOWER, *Art and Architecture*, p. 250.

representation. The proponent of this new formula was Andrea Pozzo, a painter-architect like Cortona before him, whose contributions to the arts of ceiling painting and stage sets for both the sacred and profane theaters were revolutionary and decisive. We have already seen how, in Pozzo's various designs for *apparati* for the *Quarant'ore* devotion in the Gesù, the narrative scene was dwarfed by the elaborate and expansive architectural framework that surrounded it. In his *apparati* of 1685 and 1695 the narrative scenes are hardly recognizable, virtually subsumed by the architectural elements (Figures 3.20-3.22).⁶ There is little if anything in Pozzo's designs to indicate the subject matter of the *apparati*. The same is true of Pozzo's *quadratura* paintings. For example, in his ceiling fresco representing *The Glorification of St. Ignatius* in the church of Sant'Ignazio in Rome (1691-94), the fictive architecture is emphasized to the virtual exclusion of the narrative content.⁷ St. Ignatius is depicted in the center of the vault ascending to heaven, and yet it is not so much the figural as the architectural representation that dominates the composition. Pozzo's fictive architecture is not closed but open, extending illusionistically into the heavens above.

Pozzo's success in the two media of *quadratura* painting and the *apparato* for the *Quarant'ore* devotion owed much to his mastery of one-point perspective. Indeed, Pozzo was obsessed "with the theoretical possibilities of perspective," the full scenic effects of which were dependent upon the spectator occupying the correct position on the central axis, whether it be directly below the ceiling painting or directly in front of the *apparato*. For the

⁶ WEIL, "Devotion," p. 241.

⁷ See C. STRINATI, "Gli affreschi nella chiesa di Sant'Ignazio a Roma," in De Feo and Martinelli, eds., *Andrea Pozzo*, pp. 66-93.

spectator positioned anywhere else, the perspectival illusion falls apart. Such is the case with Pozzo's sham drum and ciborium of San Francesco Saverio at Trent (1676-79) and his sham dome and baldachin of the Gesù in Rome (1681-84). The *trompe l'oeil* is breathtakingly effective when viewed from a single, central position, but woefully inadequate when viewed from anywhere else. This is because Pozzo constructed his perspectives with a single vanishing point to which he assigned a religious, almost mystical value.

Therefore, Reader, my advice is that you cheerfully begin your Work, with a Resolution to draw all the Points thereof to that true Point, the Glory of GOD...⁸

It is telling that Pozzo employed the same reticulated grid method for laying out images represented in *quadratura* painting as he did for those represented on the *apparato* for the *Quarant'ore* devotion.⁹ This common reliance upon a single method of construction again demonstrates the close interrelation between the two media. In short, *quadratura* painting functioned as a special type of sacred theater that in its form, content, and even its method of construction, was closely allied with the *apparato* for the *Quarant'ore* devotion.

Translation into the Openwork Vault

The trend in illusionistic ceiling painting towards an increasingly elaborate architectural setting at the expense of narrative representation reached its culmination in the late seventeenth and early eighteenth centuries

⁸ POZZO, *Perspectiva pictorum*, I; English ed. consulted, *Perspective in Architecture*, p. 12.

⁹ IDEM., *Perspectiva pictorum*, I, figs. 62, 100; English ed. consulted, *Perspective in Architecture*, pp. 138-139, 214-215.

with the translation of *quadratura* into actual architecture itself. The feigned perforations of traditional *quadratura* became real perforations, fiction became fact, and it was in Vittone's openwork domes that this translation reached its consummate realization.¹⁰ The first steps in this translation were taken not by Vittone, however, but by painters and designers of stage sets.

One of the first such painters was Giovanni Antonio Gherardi who, in both the Avila and Santa Cecilia Chapels in Rome, succeeded in translating *quadratura* into permanent architecture.

Both chapels are daring essays in a strange type of picturesque architecture, translations of *quadratura* painting into three dimensions ... based on Bernini's use of light and on his experiments in unifying architecture and realistic sculpture.¹¹

However, it was in Bologna, during the course of the late seventeenth and early eighteenth centuries, that the principles regulating the art of *quadratura* were applied towards the production of a strikingly scenographic version of the perforated vault.¹² It was a version particularly well suited to palace staircase halls, tall shafts of space similar in effect to Borromini's loggia vestibule at the Oratory of the Filippini. The ceilings of these staircase halls are frequently capped by light chambers that generate the illusion of spatial extension, an illusion amplified by the application of the *quadratura*. An early

¹⁰ CAVALLARI MURAT, "L'avventura neoguariniana," p. 491: "L'aspirazione vittoniana di captare quanto più si potesse di luce dall'esterno e diffonderla nell'ambiente interno con effetti d'immagine architettonica analoghi a quelli ottenuti dai migliori pittori nelle immagini figurative del suo tempo..."

¹¹ WITTKOWER, *Art and Architecture*, p. 376. See also POMMER, *Eighteenth-Century*, p. 7, who describes Gherardi's Avila Chapel as "a collection of miniature cage-like buildings" inspired by *quadratura* paintings. On the connection of Gherardi's vaults to illusionistic ceiling painting, see also PICKREL, "Antonio Gherardi," p. 103, note 23 on page 127.

¹² WITTKOWER, *Art and Architecture*, p. 292.

example is the open ceiling above the staircase hall in the Palazzo Cloetta-Fantuzzi (1680) by Paolo Canali. There a light chamber is combined with painting to produce “a scenographic spectacle.” Canali’s ceiling served as a model for subsequent ceilings in Bologna, including the one above the staircase hall of the Palazzo Aldrovandi-Montanari on the Via Galliera (ca. 1725) by Francesco Maria Angellini.¹³ Here the ceiling is perforated by an oval oculus to admit light and reveal a *quadratura* on the lantern vault. Similar ceilings are also found in the Casa Reggiani on the Via del Borgo di San Pietro, the Casa Palmieri on the Via San Vitale, the Palazzo Sanguinetti on the Strada Maggiore, the Casa Minutoli-Tegrini on the Via Santo Stefano, the Palazzo Merenda on the Via Galliera, and the Palazzo Brazzetti on the Via Barberia.¹⁴

Likewise, similar ceilings were erected by members of the Galli Bibiena family. A case in point is the ceiling above the staircase hall in the Palazzo Fantuzzi-Garagnani on the Strada Maggiore in Bologna (1750) painted by Francesco’s son, Giovanni Carlo Galli Bibiena (1717-60).¹⁵ Like his father, Giovanni Carlo was trained as a stage designer, and he conceived the staircase ceiling in the Palazzo Fantuzzi-Garagnani as a type of stage set that culminates a gradual increase in illumination above the staircase ramp.¹⁶ Giovanni Carlo combined a perforated ceiling, a light chamber, and *quadratura* affixed to the lantern ceiling to optically expand the constricted staircase.

¹³ OECHSLIN, “Vittone e l’architettura,” p. 42, note 4; VARRIANO, *Italian Baroque*, pp. 258-260, fig. 163; *Bologna Centro Storico* (Bologna, 1970), p. 159 (left figure).

¹⁴ OECHSLIN, “Vittone e l’architettura,” p. 42, note 4, figs. 23-c, 25-c; *Bologna Centro Storico*, figures illustrated on pp. 73, 84-85, 97, 118, 159.

¹⁵ VARRIANO, *Italian Baroque*, pp. 259-260, fig. 164; *Bologna Centro Storico*, p. 96 (top figure).

¹⁶ GRISERI, *La metamorphosi*, fig. 152. Giovanni Carlo was inspired by the example of staircase halls in Bolognese palaces as well as scenographic decorations such as his father’s project entitled “Interno fastoso” featuring vaults with open crowns.

This formula was applied on a larger scale to the interior of Sant'Antonio Abate at Parma (1712-60) by Ferdinando Galli Bibiena himself (Figure 3.43). Once again an open ceiling, a light chamber, and an illusionistic fresco are combined to produce a scenographic effect. In this case, however, the interior is no longer a tight, cramped, vertical shaft of space, but a spacious longitudinal hall. Ferdinando was active as a stage designer and in his design for Sant'Antonio Abate he drew heavily upon the art of stage decoration. The vault is divided into two shells, the outer one of which is covered in fresco depicting cherubs and clouds in the heavens, and the inner one of which is riddled with apertures through which the fresco on the outer shell is viewed from below.¹⁷ There is no depiction of architecture, however, no *quadratura*. Instead, the inner shell becomes its own *quadratura*, a three-dimensional *quadratura* that isolates and frames the figures painted on the shell above. The feigned perforations of traditional *quadratura* have here become actual perforations. Painted fiction has become architectural fact.

The formula of the Bolognese palace staircase vault was also applied by Ferdinando's son, Antonio Galli Bibiena, to the church interior of Sant'Antonio Abate at Villa Pasquali near Sabbioneta (1765-84; Figures 3.46-3.47). Like his father, Antonio worked primarily as both a stage designer and a *quadraturista*. The dome and semi-domes of his church are divided into two shells, the inner one a lacework of ribs and the outer one a solid shell upon whose surface a fresco is painted. The fresco, which dates to the nineteenth century and may not reflect Galli Bibiena's original intention, depicts figures

¹⁷ The ceiling fresco was painted by Giuseppe Peroni (1710-76), albeit extraneous to Ferdinando's original intention, see COMOLI MANDRACCI, "«Cielo» e iconografia," p. 397.

of angels and saints hovering amid large clouds in a blue sky.¹⁸ A certain perspectival effect is achieved by a gradation of colors and a layering of planes but again, as at Sant'Antonio Abate at Parma, there is no *quadratura*. Instead, the inner perforated shells of the dome and semi-domes again act as their own three-dimensional *quadratura* with fictive apertures translated into actual ones.

The translation of *quadratura* into architecture was fully realized in the openwork domes of Bernardo Vittone.¹⁹ Vittone drew upon the innovations of Gherardi and the Galli Bibienas for his designs.²⁰ He also appears to have visited Bologna and seen the palace staircase vaults there.²¹ Evidence of such a visit is found in both *Istruzioni elementari* and *Istruzioni diverse*, in which Vittone illustrates and describes in detail the staircase of the Palazzo Ranuzzi (today the Palazzo di Giustizia) at Bologna.²² Certainly, Bolognese

¹⁸ IBID., p. 398, note 2.

¹⁹ The connection between Vittone's domes and *quadratura* painting was first identified by WITTKOWER, *Art and Architecture*, p. 428, note 64 on p. 565; IDEM., "Vittone's Domes," pp. 217-218, and subsequently examined by PORTOGHESI, *Bernardo Vittone*, p. 28; POMMER, *Eighteenth-Century*, pp. 111, 114, note 49 on pp. 126-127, note 50 on p. 127; OECHSLIN, "Vittone e l'architettura," pp. 42-43, 45, 48-49; IDEM., "Il contributo dei Bibiena," p. 142; CAVALLARI MURAT, *Lunga la Stura*, p. 295, ill. VII, 2, fig. 20; A. GRISERI, *Itinerario di una provincia, Cuneo* (Cuneo, 1974), pp. 140-142; MILLON, "Vittone," in *Macmillan Encyclopedia*, p. 343; A.M. MATTEUCCI, "Andrea Pozzo quadraturista, incidenze e divergenze," in De Feo and Martinelli, eds., *Andrea Pozzo*, pp. 268-279, here p. 273. See also R. BINAGHI, "Sistemi voltati di Bernardo Vittone ed alcune realizzazioni del quadraturismo," in F. Farneti and D. Lenzi, eds., *L'Architettura dell'Inganno: Quadraturismo e grande decorazione nella pittura di età barocca* (Florence, 2004), pp. 243-256; and IDEM., "Geometria e Scenografia. Due scienze al servizio delle architetture vittoniane," in Canavesio, ed., *Il voluttuoso genio dell'occhio*, pp. 85-129.

²⁰ See PORTOGHESI, *Bernardo Vittone*, pp. 97-98; IDEM., *Roma Barocca*, p. 304; and OECHSLIN, "Vittone e l'architettura," pp. 40, 43.

²¹ Oechslin (IBID., pp. 42-43, note 1) suggests that Vittone visited Bologna once on his return from Rome to Turin in 1733, while BINAGHI, "Geometria," p. 104, argues that Vittone visited Bologna twice, once in 1729 on his way to Rome, and again in 1733 on his return to Piedmont.

²² VITTONI, *Istruzioni elementari*, p. 455, pl. 79, no. 12: "...ed in Bologna quella del Ranuzzi..."; IDEM., *Istruzioni diverse*, pp. 150-151, pl. 18: "...la ragguardevole principal Scala del Palazzo Ranuzzi in Bologna... Disposta vedesi questa a tre rami in capo, ed a parte sinistra del Porticato, che esiste sull' ingresso del gran Cortile del Palazzo, due de' quali rami presentano uno per parte la salita loro verso esso Porticato, e rigirandosi con eguale maniera in forma

scenographers and *quadraturisti* portray in their decorations and paintings the same scenographic motifs as those used by Vittone.²³ Vittone himself owned a copy of *Fregi dell'architettura* written by the Bolognese painter and decorator, Agostino Mitelli (1609-60), in which many such decorations are illustrated.²⁴

Vittone may also have seen Ferdinando Galli Bibiena's openwork vault in Sant'Antonio Abate at Parma, as indicated by the close resemblance between that vault and Vittone's openwork domes at Vallinotto and Bra.²⁵ As for Antonio Galli Bibiena's church of Sant'Antonio Abate at Villa Pasquali, the present edifice dates to 1765 when, after the original structure had suffered collapse, it was rebuilt according to Antonio's design. Thus Antonio's present church would have been constructed much too late to have exerted any influence on Vittone's designs for openwork domes of the late 1730s and early 1740s. However, the original structure at Villa Pasquali, itself covered by an open, double-shelled vault and assuredly the work of another Galli Bibiena,

d'arco portano ad un stesso ripiano, a cui succede tramezzo a' predetti il terzo ramo, che va a sboccare al piano d'una nobile e spaziosa Galleria sopra il detto Porticato, libero lasciando sotto di se, e del ripiano anzidetto, e tra li due primi rami il passaggio ai cocchj per portarsi in un Cortile privato di detto Palazzo, dopo che da essi sono a piè della Scala, per salire agli Appartamenti, smontate le Persone, che si portano ad esso." See also OLIVERO, *Le opere*, p. 68. On the staircase in the Palazzo Ranuzzi, see *Bologna Centro Storico*, p. 144.

²³ OECHSLIN, "Vittone e l'architettura," p. 43, fig. 26-b, publishes a Bolognese sketch of a scenographic decoration with a central space and an open dome (Florence, Uffizi 91576 S) that parallels Vittone's designs.

²⁴ A. MITELLI. *Fregi dell'architettura* (Bologna, 1645; 2nd ed., Rome, 1691). On the listing of Mitelli's treatise in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 250, no. 650. See also BINAGHI, "Geometria," p. 108, note 162. See also H. KARNER, "Architektur und Raumbild im 18. Jahrhundert: Raumkunst zwischen Architektur und Quadratur," *Römische historische Mitteilungen* XLI (1999), pp. 223-238, who traces the mutual inspiration between Mitelli's painting and Vittone's architecture, among others, resulting in the transfer of architectural forms and types from Italy to Austria during the eighteenth century.

²⁵ See CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 59, no. 146; POMMER, *Eighteenth-Century*, p. 113, note 49 on pp. 126-127; and OECHSLIN, "Vittone e l'architettura," pp. 39-40, note 4 continued on p. 41.

most likely Ferdinando, was erected much earlier, perhaps as early as 1734.²⁶ It is possible then that Vittone would have seen the church in its original form, and at a date early enough to have influenced his thinking on the openwork dome. What is certain is that members of the Galli Bibiena family were erecting double-shelled vaults in northern Italy in the years immediately before and after Vittone was producing his own double-shelled domes there. Moreover, some of the Galli Bibienas were living and working in Piedmont itself. For example, in 1740, the same year that he published *Architetture e prospettive*, Giuseppe Galli Bibiena was in Turin producing stage set decorations for the play, *Arsace*, and designing *quadratura* for the dome of the Consolata.²⁷ The next year Giuseppe was at work painting *quadratura* frescoes on the dome of the Sanctuary at Vicoforte Mondovì.²⁸ Such activity could hardly have escaped Vittone's notice, nor could he have been unaware of Francesco and Ferdinando Galli Bibiena's earlier activity in the region.²⁹

²⁶ POMMER, *Eighteenth-Century*, p. 113, note 49 on pp. 126-127.

²⁷ WITTKOWER, *Art and Architecture*, p. 428, note 64 on p. 565; IDEM., "Vittone's Domes," p. 217.

²⁸ Galli Bibiena left Vicoforte Mondovì in 1742 and was succeeded by his student, Felice Biella. On Giuseppe Galli Bibiena's activity in Piedmont during the early 1740s, see BAUDI DI VESME, *Schede Vesme*, II, pp. 505-506; CARBONERI, *L'architetto Francesco Gallo*, pp. 154-155; POMMER, *Eighteenth-Century*, p. 113, note 49 on pp. 126-127; L. BERTONE, "Francesco Gallo e la cupola ellittica del Santuario di Mondovì a Vicoforte," *Studi Piemontesi* XXIV:2 (November 1995), pp. 279-313, here p. 301, note 64; and COMOLI/PALMUCCI, *Francesco Gallo*, p. 266. See also OECHSLIN, "Vittone e l'architettura," p. 41, note 2, who draws a connection between Santa Chiara at Bra and the *quadratura* produced by the circle of Galli Bibienas, in particular the painted vault of the Chapel of Sant'Agata in the Cathedral of Parma.

²⁹ During the 1690s, for example, Ferdinando had submitted designs of scenes and machines for the court theater. On the work of Ferdinando and Francesco Galli Bibiena in Piedmont and Lombardy between 1680 and 1708, see BAUDI DI VESME, *Schede Vesme*, II, p. 505; A.F. IVALDI, "Note in margine all'attività di Ferdinando Galli Bibiena a Genova," *Palladio* XXVIII:1-4 (1979), pp. 97-112; MATTEUCCI, *L'architettura del Settecento*, pp. 223-224; and E. FILIPPI, *L'arte della prospettiva. L'opera e l'insegnamento di Andrea Pozzo e Ferdinando Galli Bibiena in Piemonte* (Florence, 2002).

Vittone also drew upon Guarino Guarini's dematerialized and diaphanous domes, which themselves owe much to the example of *quadratura* painting. Indeed, Guarini's original idea of the perforated dome appears to have owed much to the *quadratura* on the presbytery vault of San Silvestro al Quirinale in Rome (ca. 1590s) painted by the brothers Giovanni and Cherubino Alberti (Figure 5.1).³⁰ This church was the seat of Guarini's novitiate in Rome and thus its *quadratura* was readily and regularly available to Guarini for viewing at an early and impressionable stage of his architectural formation. The fictive perforations of the *quadratura* visually reduce the presbytery vault of San Silvestro al Quirinale to an architectural skeleton beyond which hosts of putti appear to hover in the sky. The same is true of the *quadratura* painted on the old sacristy vault of San Giovanni in Laterano in Rome (1592) again by the brothers Alberti, another work which Guarino would have had occasion to see during his novitiate (Figure 5.2).³¹ Large fictive oculi illusionistically dissolve the webbing of the groin vaults in a manner that anticipates the actual perforations of Guarini's vaults, notably the vault he projected for the *gran salone* of the Castello at Racconigi (Figure 4.92). In short, the conception of the vault as an osseous screen, a conception first imagined and depicted in fresco by *quadraturisti*, became a determinant feature of Guarini's architecture and would in time, as Marcello Fagiolo observes, become a determinant feature of Vittone's architecture as well.³²

³⁰ FAGIOLO, "La «geosofia»," p. 189, 202, fig. 13. See also OECHSLIN, "Vittone e l'architettura," pp. 41-42, note 3. On the brothers Giovanni and Cherubino Alberti and their *quadratura* paintings, see M.V. BRUGNOLI, "Un palazzo romano del tardo '500 e l'opera di Giovanni e Cherubino Alberti a Roma," *Bollettino d'arte* XLV (1960), pp. 223-246; and M. ABROMSON, "Clement VIII's Patronage of the Brothers Alberti," *The Art Bulletin* LX:3 (September 1978), pp. 531-547.

³¹ FAGIOLO, "La «geosofia»," p. 189, fig. 14.

Guarini states in *Architettura civile* that there are a variety of vaults that permit a prominent field for painting.³³ One such vault is the double-shelled dome that he designed as part of his project, illustrated in his treatise, for San Gaetano at Vicenza (Figure 4.91). Guarini eliminated the ribs altogether leaving a smooth continuous surface reserved for fresco depicting a celestial glory. Guarini's interlaced ribbed domes were themselves on occasions also painted. For example, in 1689, six years after Guarini's death but apparently in accordance with the architect's intentions, oilcloths were fastened to the interlaced ribbed dome of San Lorenzo and painted for the presumed purpose of adding "to the visual extension of the domed space."³⁴

It is a curious fact that the scenographer and painter, Andrea Pozzo, was active in Piedmont and Lombardy between 1665 and 1681 at precisely the same time Guarini was practicing architecture there.³⁵ Thus Pozzo, the Jesuit

³² IBID., p. 189.

³³ GUARINI, *Architettura civile*, Trat. III, cap. xxvi, oss. ix, p. 286: "Questa maniera mi ha somministrato una gran varietà di volte, le quali fanno nobilissima vista, e lasciano campi egregi per la pittura"; Trat. III, cap. xxvi, oss. x, p. 286: "...e queste volte, oltre che sono belle, lasciano bei campi per dipingere..." See also TAVASSI LA GRECA, "Considerazioni," p. 273.

³⁴ ROBISON, "Optics," p. 395. The original dome was decorated with paintings by Giovanni Domenico Molinari and remade at the beginning of the 1800s by Pietro Fea; see TAMBURINI, *Le chiese*, p. 212. The painted decoration of the dome, together with much of the dome itself, was destroyed in the bombing sustained by the church during World War II. The present dome, rebuilt after the war, is without frescoes or painted decoration of any kind.

³⁵ In 1671 Pozzo designed and prepared *apparati* for the canonization of St. Francis Borgia, first in the church of San Fedele in Milan and then, a few months later, in the church of Santi Ambrogio e Andrea in Genoa; see A.F. IVALDI, "Un 'teatro sacro' di Andrea Pozzo a Genova (15 novembre 1671)," *Teatro archivio* 7 (May 1984), pp. 101-111; DARDANELLO, "Esperienze," p. 32, note 29 on p. 41; MARTINELLI, "'Teatri sacri,'" p. 94. Pozzo also designed an altar dedicated to St. Ignatius (1677-80) in the Jesuit church of Santi Martiri in Turin, the same church for which, 60 years later, Vittone would produce a number of furnishings, additions, and renovations, including his designs for *apparati* for the *Quarant'ore* devotion; see DARDANELLO, "Altari piemontesi," pp. 155-163; and IDEM., "Esperienze," pp. 30, note 19 on p. 41. On Pozzo's activity in Piedmont and surrounding regions, see also BRAYDA/COLI/SESIA, "Ingegneri," p. 129; A. GRISERI, "Pittura," in V. Viale, ed., *Mostra del Barocco Piemontese*, 3 vols. (Turin, 1963), II, pp. 1-128, here pp. 67-68; G. ROMANO, "Andrea Pozzo in Piemonte," in M. Di Macco and G. Romano, eds., *Diana Trionfatrice: Arte di corte nel Piemonte del Seicento* (Turin, 1989), pp. 258-264; IDEM., "Una ricerca per Andrea Pozzo ad Alessandria," *Bollettino*

priest, and Guarini, the Theatine priest, were both producing for their respective clerical orders, at one and the same time, and in one and the same place, notable illusionistic works of art and architecture. Between 1675 and 1677, while Guarini was overseeing the construction of the Theatine church of San Lorenzo, Pozzo was painting his celebrated frescoes in the Jesuit church of San Francesco Saverio (now the Missione) at Mondovì. Pozzo's frescoes on the presbytery wall and vaults depict a fictive architecture that, in its open arrangement set against a luminous field, is comparable in its illusionistic effect to the real architecture of San Lorenzo.

Just as Guarini's buildings strongly influenced the works of subsequent architects who practiced in Piedmont, including Vittone, so too Pozzo's frescoes strongly influenced the works of subsequent *quadraturisti* who practiced in Piedmont during the early to mid-decades of the eighteenth century, including Giovanni Battista Alberoni, Giuseppe Pietro Dallamano, Giovanni Battista Bettini, Gian Domenico Rosso di Busca, and various members of the Pozzo family who hailed from Lugano (unrelated to Andrea Pozzo himself who had come from Trent).³⁶

Among the many accomplished painters of the Pozzo family, four stand out — the brothers Giovanni Battista (active 1700-34) and Pietro Antonio the Elder (active 1716-47), and Giovanni Battista's two sons, Pietro Antonio

della Società Piemontese di Archeologia e Belle Arti n.s. XLIII (1989), pp. 307-310; IDEM., "Notizie su Andrea Pozzo tra Milano, Genova e il Piemonte," *Prospettiva, rivista di storia dell'arte antica e moderna* II:57-60 (1990), pp. 294-307; IDEM., "Ancora su Andrea Pozzo in Piemonte e Lombardia," in Battisti, ed., *Andrea Pozzo*, pp. 296-301; FILIPPI, *L'arte della prospettiva*; and DARDANELLO, "Esperienze," pp. 24-41.

³⁶ On the *quadratura* and *quadraturisti* of eighteenth-century Piedmont, see E. FILIPPI, "L'arte del quadraturismo nel Settecento piemontese," *Alba Pompeia* n.s. XX:2 (1999), pp. 59-74; and IDEM., "Quadratura e quadraturisti nel Piemonte del Settecento. I nuovi gusti di corte ed i suoi riflessi nelle architetture minori della provincia," in Fauzia Farneti and Deanna Lenzi, eds., *L'Architettura dell'Inganno: Quadraturismo e grande decorazione nella pittura di età barocca* (Florence, 2004), pp. 229-241.

the Younger (active 1727-88) and Giovanni Pietro (1713-98).³⁷ They painted illusionistic frescoes depicting diaphanous vaults of a type that, rendered in perspective with feigned perforations opening onto celestial scenes beyond, Vittone would later translate into actual architecture.³⁸ Vittone certainly was familiar with the work of the Pozzos since three of them painted frescoes in his uncle Plantery's church of the Assunta at Savigliano (Figure 5.3) — Giovanni Battista who painted the *trompe l'oeil* frescoes that cover the dome (1712-15) and Pietro Antonio the Younger and Giovanni Pietro who painted the choir (1739).³⁹ Vittone also would have been familiar with the frescoes that Pietro Antonio the Younger and Giovanni Pietro painted in some of the rooms in the Palazzina at Stupinigi (1733).⁴⁰ In addition, Vittone would have had occasion to view the many ceiling frescoes that the Pozzos painted in the churches erected by Francesco Gallo, an architect whose work Vittone closely studied.⁴¹ Indeed, the Pozzos appear to have been especially favored by Gallo, with Pietro Antonio Pozzo the Elder having painted the dome in Gallo's

³⁷ There was also Carlo Pozzo, father of Giovanni Battista and Pietro Antonio the Elder. On the many and sundry members of the Pozzo family who painted ceiling frescoes in eighteenth-century Piedmont, see BAUDI DI VESME, *Schede Vesme*, III, pp. 859-865; M. BERTONE, "L'attività pittorica in Piemonte di Pietro Antonio Juniore e Giovanni Pietro Pozzo," Thesis, Università di Torino, 1988-89; and G. BRIGANTI, ed., *La pittura in Italia: Il Settecento*, 2 vols. (Milan, 1989), II, pp. 840-841.

³⁸ The close connection between the Pozzo brothers' frescoes and Vittone's domes was first observed by WITTKOWER, "Vittone's Domes," pp. 217-218.

³⁹ Giovanni Battista's dome fresco depicts *The Coronation of the Virgin*. On the paintings in the Assunta by Pozzo and his sons, see CARBONERI, *L'architetto Francesco Gallo*, p. 114; IDEM., "Architettura," in *Mostra del Barocco*, I, p. 43, no. 73, pl. 62-b; MALLÉ, *L'arti figurative*, p. 382; *Guida Touring Club*, p. 256; GRISERI, *Itinerario*, pp. 139-140, fig. 212; PROLA/PEYROT, *Architetture Barocche*, un-numbered page (listing under Savigliano); BRIGANTI, ed., *La pittura in Italia*, II, p. 840; ROMANO, ed., *Torino 1675-1699*, p. 353; and COMOLI/PALMUCCI, *Francesco Gallo*, p. 237.

⁴⁰ BRIGANTI, ed., *La pittura in Italia*, II, p. 840.

⁴¹ MARINI, *L'architettura barocca*, p. 154.

Sanctuary of Vicoforte Mondovì (1736-39)⁴² and Pietro Antonio Pozzo the Younger having painted the *quadratura* (1727) on the vault of Gallo's Misericordia at Mondovì Piazza and the oil canvases in Gallo's Cathedral of San Donato at Mondovì.⁴³ In addition, Pietro Antonio the Younger collaborated with his brother, Giovanni Pietro, to paint the *quadratura* (1738-39) on the vaults of Gallo's Confraternity Church of the Trinità at Fossano (Figure 5.4).⁴⁴ Later, during the early to mid-1740s, the two brothers painted the *quadratura* on the dome of Gallo's Confraternity Church of Santa Croce e San Bernardino at Cavallermaggiore (Figure 5.5).⁴⁵

⁴² Pozzo's frescoes, however, proved unsatisfactory and were destroyed in 1741. At that time Pozzo, who himself had inherited the commission from Giuseppe and Nicolò Dallamano, was succeeded by the *quadraturista*, Giuseppe Galli Bibiena, and the *figurista*, Sebastiano Galeotti, who painted new frescoes. These latter frescoes were themselves subsequently altered and replaced between 1746 and 1748 by the *quadraturista*, Felice Biella, a student and collaborator of Giuseppe Galli Bibiena, and the *figurista*, Mattia Bortoloni. See CARBONERI, *L'architetto Francesco Gallo*, pp. 153-155; IDEM., "Architettura," in *Mostra del Barocco*, I, p. 42, no. 70; MALLÉ, *L'arti figurative*, p. 382; BAUDI DI VESME, *Schede Vesme*, III, p. 860; BRIGANTI, ed., *La pittura in Italia*, II, p. 840; BERTONE, "Francesco Gallo," p. 301, note 64; and COMOLI/PALMUCCI, *Francesco Gallo*, p. 266, note 19 on p. 267.

⁴³ Pozzo worked in collaboration with Giovanni Francesco Gagini who painted the figures; see BONINO, "Francesco Gallo," p. 40; CARBONERI, *L'architetto Francesco Gallo*, p. 89, note 23 on, p. 91; IDEM., *Antologia*, p. 128; MALLÉ, *L'arti figurative*, p. 382; BAUDI DI VESME, *Schede Vesme*, II, p. 487; *Guida Touring Club*, p. 274; BRIGANTI, ed., *La pittura in Italia*, II, p. 840; BERTONE, "Francesco Gallo," p. 301, note 64; and COMOLI/PALMUCCI, *Francesco Gallo*, p. 213.

⁴⁴ The *quadratura* was begun in 1736 by Giuseppe Pietro Dallamano with figures by Michele Antonio Milocco. Dallamano was succeeded the following year by several of the Pozzo brothers, the exact identity of whom is unclear. They have been variously identified as Carlo and Giovanni Pietro Pozzo (BRINCKMANN, *Theatrum Novum*, p. 28, no. 72; BONINO, "Francesco Gallo," p. 34; CARBONERI, *L'architetto Francesco Gallo*, p. 163, pls. 65-66; IDEM., "Architettura," in *Mostra del Barocco*, I, pp. 42-43; COMOLI/PALMUCCI, *Francesco Gallo*, p. 273, note 26), Pietro Antonio the Younger and Giovanni Pietro Pozzo (*Guida Touring Club*, p. 259; BRIGANTI, ed., *La pittura in Italia*, II, p. 840), and Pietro Antonio Pozzo (BAUDI DI VESME, *Schede Vesme*, II, p. 701). Fossano is the same locale where one of the Pozzo brothers painted the *quadratura* on the vaults of San Filippo Neri (1739) in collaboration once again with Milocco who painted the figures. The identity of this Pozzo is also unclear, either Pietro Antonio Pozzo (BAUDI DI VESME, *Schede Vesme*, II, p. 701), or Giovanni Battista Pozzo (*Guida Touring Club*, p. 261), or Giovanni Pietro Pozzo (BRIGANTI, ed., *La pittura in Italia*, II, p. 840).

⁴⁵ On the collaboration of the Pozzo brothers on the ceiling fresco, which depicts *The Triumph of the Cross*, see BRINCKMANN, *Theatrum Novum*, p. 25, nos. 54-55, pls. 54-55; CARBONERI, *L'architetto Francesco Gallo*, p. 185, pl. 78; IDEM., "Architettura," in *Mostra del Barocco*, I, p. 43, no. 72; MALLÉ, *L'arti figurative*, pp. 382-383; *Guida Touring Club*, p. 251; BRIGANTI, ed., *La*

These frescoes were all painted between the late 1720s and the early 1740s, the very years when Vittone was designing his openwork churches at Vallinotto, Alessandria, Chieri, and Bra. Moreover, the sites of these frescoes — Savigliano, Fossano, Mondovì Piazza, Vicoforte Mondovì, Mondovì, and Cavallermaggiore — are all located in the province of Cuneese, south of Turin, in the general region in which Vallinotto, Alessandria, Chieri, and Bra are also located.⁴⁶ Cavallermaggiore in fact is located some 10 kilometers (6 miles) to the northwest of Bra, and so there is a very close proximity, geographical as well as chronological, between the Pozzos' *quadratura* in Santa Croce e San Bernardino at Cavallermaggiore and Vittone's openwork dome in Santa Chiara at Bra.⁴⁷ Indeed, the Pozzos' frescoes at Cavallermaggiore are painted with fictive openings of a type that precisely anticipated the actual perforations of Vittone's dome at Bra.⁴⁸ It is of some interest that Pietro Antonio Pozzo the Younger would in time become associated with Pietro Paolo Operti, the *figurista* who painted the ceiling frescoes in Vittone's church of Santa Chiara at Bra, the two painters joining together in 1755 to paint

pittura in Italia, II, pp. 840-841; and COMOLI/PALMUCCI, *Francesco Gallo*, p. 289. Giovanni Pietro Pozzo himself, working alone, had painted at an earlier time (1714) the decoration on Gallo's temporary triumphal arch in Mondovì Piazza; see CARBONERI, *L'architetto Francesco Gallo*, p. 24; and MALLÉ, *L'arti figurative*, p. 382.

⁴⁶ On the decoration of eighteenth-century churches in Cuneo, see M. SASSONE, "La decorazione delle chiese di Cuneo nel Settecento," *Bollettino della Società per gli Studi Storici, Archeologici ed Artistici nella Provincia di Cuneo* CIX (1993), pp. 65-94. Mondovì Piazza and Vicoforte Mondovì are both very near Mondovì Breo and Villanova di Mondovì where Vittone would later erect the churches of Santi Pietro e Paolo and Santa Croce respectively, both with hollowed out pendentives.

⁴⁷ Cavallermaggiore is also the site of the Clarissan convent of Santa Chiara (destroyed 1808) where one of Vittone's half-sisters, Francesca Maria, was cloistered.

⁴⁸ MATTEUCCI, *L'architettura del Settecento*, p. 226, observes that the illusionistic pictorial decoration of the interior of Santa Croce e di San Bernardino at Cavallermaggiore, as well as the interiors of Gallo's churches of Santissima Trinità at Fossano and San Giuseppe ("La Misericordia") at Mondovì Piazza, anticipate the openwork interiors of Vittone's churches.

illusionistic frescoes on the vault of San Bernardino at Saluzzo. Saluzzo itself is another town in the region of Cuneese, located in close proximity to Bra as are many other towns where the Pozzo brothers painted *quadratura*, including Stupinigi, Cavallerleone,⁴⁹ Asti,⁵⁰ Vigone,⁵¹ and Cuneo.⁵²

The two brothers also collaborated to paint *quadratura* on the dome of San Giuseppe at San Damiano d'Asti (1744; Figure 5.6).⁵³ Wittkower detects in these frescoes a striking formal resemblance to the perforated dome of

⁴⁹ At Cavallerleone Pietro Antonio the Younger and Giovanni Pietro decorated several rooms in the Villa Carron-Ceva (now Turello); see *Guida Touring Club*, p. 249.

⁵⁰ At Asti various members of the Pozzo family were engaged in numerous commissions. Pietro Antonio (it is unclear whether the Elder or the Younger) and Giovanni (it is unclear whether Giovanni Battista or Giovanni Pietro) collaborated to produce illusionistic frescoes in the *salone* of the Palazzo Roero and in the Sacristy of San Martino; see MATTEUCCI, *L'architettura del Settecento*, p. 226. Giovanni Battista Pozzo painted *quadratura* in the church of Sant'Agostino; see BRIGANTI, ed., *La pittura in Italia*, II, p. 840. Also at Sant'Agostino Pietro Antonio the Younger and Giovanni Pietro painted the *quadratura* on the vault in collaboration with Giovanni Francesco Gagini who painted the figures; see BAUDI DI VESME, *Schede Vesme*, II, p. 487. Pietro Antonio the Younger painted *quadratura* on some of the vaults of the Cathedral of Santi Maria dell'Assunta e Gottardo in collaboration with Michele Antonio Milocco and Federico Bianchi who painted the figures; see *Guida Touring Club*, p. 106. But see BAUDI DI VESME, *Schede Vesme*, II, p. 701, who lists only Giacomo and Antonio Giovannini as having painted the *quadratura* of the Asti Cathedral. The Chapel of San Filippo Neri in the Cathedral of Asti was frescoed by Giovanni Battista Pozzo in collaboration with Federico Bianchi; see BRIGANTI, ed., *La pittura in Italia*, II, p. 840. Finally, several of the brothers, again it is unclear which ones, painted *quadratura* in the choir and presbytery of the church of the Carmine in collaboration with Milocco who painted the figures; see BAUDI DI VESME, *Schede Vesme*, II, p. 701.

⁵¹ At Vigone one of the Pozzo brothers, most likely Giovanni Pietro, painted frescoes inside San Bernardino (now the Confraternity Church of Santa Croce) together with other paintings attributable to Michele Antonio Milocco; see MALLÉ, *L'arti figurative*, p. 383; and *Guida Touring Club*, p. 292.

⁵² At Cuneo Pietro Antonio Pozzo the Elder painted frescoes inside the churches of Santa Chiara (1727), San Giovanni Decollato, and San Sebastiano (1743); see BAUDI DI VESME, *Schede Vesme*, III, p. 861; and BRIGANTI, ed., *La pittura in Italia*, II, p. 840.

⁵³ The frescoes depict various scenes from the life of St. Joseph, the titular saint of the church. The fresco on the dome depicts *The Story of the Virgin and St. Joseph*, the ones on the pendentives depict *The Four Parts of the World*, and the one on the choir vault portrays *The Apotheosis of St. Joseph*. There is also a painting above the altar displaying *The Exaltation of the Cross*. See MALLÉ, *L'arti figurative*, p. 382; BAUDI DI VESME, *Schede Vesme*, III, p. 861, who erroneously attributes the paintings to Pietro Antonio the Elder; WITTKOWER, "Vittone's Domes," pp. 217-218, fig. 287; *Guida Touring Club*, p. 185; and BRIGANTI, ed., *La pittura in Italia*, I, p. 57, fig. 60, II, p. 841.

Vittone's Santa Chiara at Bra.⁵⁴ Executed at the same time and in the same locale as Vittone's church, the Pozzos' ceiling fresco is equipped with feigned perforations that open up onto painted Biblical scenes that occupy a space beyond. The Pozzos enhanced the illusion by combining the fictive perforations (positioned at the base of the dome) with actual ones (inserted into the annular cornice) vertically aligned one above the other. In a comparable manner, Vittone equipped his dome with actual perforations through which painted scenes are viewed beyond.

Wittkower identifies other *quadratura* paintings that are closely connected with Vittone's perforated domes. One such painting is the ceiling fresco in the chapter house of Santa Marta in Genoa with *quadratura* by Giovanni Battista Revello and figures by Jacopo Antonio Boni (Figure 5.7).⁵⁵ Fictive apertures are rendered in perspective with the figures made to appear as though they occupy a space beyond. Another such painting is the fresco on the dome of the Consolata in Turin (1740) with *quadratura* by Giovanni Battista Alberoni after a design by his teacher, Giuseppe Galli Bibiena, and figures by Giovanni Battista Crosato.⁵⁶ It was executed just before Vittone began

⁵⁴ WITTKOWER, "Vittone's Domes," pp. 217-218. San Damiano d'Asti is located about 25 kilometers (16 miles) to the northeast of Bra. Wittkower dates Pozzo's ceiling frescoes in San Giuseppe to the years immediately after 1715 when construction on the church was completed, a date that is certainly too early. BAUDI DI VESME, *Schede Vesme*, III, p. 861, dates them to 1741-44 when Pozzo was practicing in Piedmont, and thus contemporary with Santa Chiara at Bra (1742-48).

⁵⁵ WITTKOWER, "Vittone's Domes," p. 218, fig. 288.

⁵⁶ IDEM., *Art and Architecture*, p. 428, note 64 on p. 565; IDEM., "Vittone's Domes," p. 217. The connection between the *quadratura* frescoes on the dome of the Consolata and Vittone's perforated dome at Bra is also noted by POMMER, *Eighteenth-Century*, p. 113, note 49 on pp. 126-127; OECHSLIN, "Vittone e l'architettura," p. 48, note 2; and MILLON, "Vittone," in *Macmillan Encyclopedia*, p. 343. On Alberoni and Crosato's work at the Consolata, see G. FIOCCO, *Giambattista Crosato, pittore di Casa Savoia* (Venice, 1941), pls. 24-29; BAUDI DI VESME, *Schede Vesme*, I, pp. 9-10; and TAMBURINI, *Le chiese*, p. 266, note 6. On Crosato, see also G.

designing Santa Chiara at Bra, and it again features fictive apertures that, in anticipation of Vittone's actual apertures, illusionistically appear to open onto spaces beyond. The fictive apertures of the Consolata dome are positioned immediately above the keystones of the supporting arches in precisely the same manner as the actual apertures of Vittone's domes at Vallinotto and Bra. But where spatial extension is only feigned in the dome of the Consolata it is made real in Vittone's domes.

Alberoni and Crosato's activity in Piedmont during the early 1740s could hardly have gone unnoticed by Vittone. Alberoni, an academician like Vittone himself,⁵⁷ painted, in addition to the *quadratura* in the Consolata, the false architecture on the façade of San Giuseppe in Turin, a structure associated with the convent and church of the Chierici Regolari Ministri degli Infermi for which Vittone was commissioned to draft a project (*ca.* 1750).⁵⁸ Crosato, a Venetian whose aerial and soft style closely approximated that of Giovanni Battista Tiepolo (Figure 5.16), had been brought in by Juvarra to paint various rooms and ceilings in the Palazzina at Stupinigi (1733).⁵⁹ He also painted the dome of Juvarra's Sant'Andrea at Chieri (*ca.* 1733), a church that, as we have seen, served as the primary model for Vittone's design for Santa Chiara at Bra.⁶⁰

FIOCCO, "Risarcimento storico di Giambattista Crosato," *Atti del Reggio Istituto veneto di scienze, lettere ed arti* XCIV:2 (1934-35), pp. 251-278.

⁵⁷ Alberoni graduated from the Accademia Clementina at Bologna in 1730; see BAUDI DI VESME, *Schede Vesme*, I, p. 9.

⁵⁸ VITTONI, *Istruzioni diverse*, pp. 177-178, pls. 53-56. See also TAMBURINI, *Le chiese*, pp. 266-267, note 9.

⁵⁹ On Crosato's work at Stupinigi, see FIOCCO, *Giambattista Crosato*, pp. 39-42, pls. 1-17; and A. GRISERI, "Il 'Rococò' a Torino e Giovan Battista Crosato," *Paragone* XII:135 (1961), pp. 42-65.

⁶⁰ Crosato painted figures of various saints on the dome and figures of statues on the four arms of Juvarra's lost church; see BAUDI DI VESME, *Schede Vesme*, I, p. 378.

It was undoubtedly on the basis of this success that Vittone brought in Crosato to paint the ceiling frescoes in his own church of Santi Marco e Leonardo in Turin (1741-42, demolished 1813) whose dome, unlike most of the domes that Vittone designed at this early stage of his career, was a single shelled structure.⁶¹ Crosato's frescoes are now lost, but presumably they featured fictive openings that illusionistically extended the interior space of the church. Vittone and Crosato's paths crossed again at the Immacolata Concezione in Turin for which Crosato painted the fresco on the crowns of the vault,⁶² and for which Vittone designed both the Cappella del Beato Vincenzo de' Paoli (1742) and wooden furnishings of the sacristy.⁶³

Vittone collaborated with still another fresco painter, the *quadraturista*, Giuseppe Pietro Dallamano, a.k.a. "Alemanni" and "D'Alemanni" (1679-1758) at the Confraternity Church of Santa Croce at Caramagna, with Dallamano, assisted by his son, Nicolò, having painted illusionistic architectural perspectives on the ceiling and walls (1735), and Vittone having designed the

⁶¹ Crosato painted figures of the two titular saints, St. Mark and St. Leonard, to either side of the Virgin in the choir of the major altar of Vittone's lost church; see IBID., I, p. 378. Vittone neither mentions Crosato's paintings in the description of his church in *Istruzioni diverse*, nor illustrates them in the corresponding plate.

⁶² Crosato painted figures of angels and the Holy Trinity in Glory. On the attribution of the frescoes to Crosato, see FIOCCO, *Giambattista Crosato*, pp. 29-30; BAUDI DI VESME, *Schede Vesme*, I, p. 378; and TAMBURINI, *Le chiese*, p. 238, note 20.

⁶³ Vittone drew up several designs for the Cappella del Beato Vincenzo de' Paoli, the more exuberant of which, having remained unexecuted, is recorded in one of his drawings in the Musée des Arts Décoratifs in Paris; see CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 24, no. 37, fig. 52; TAMBURINI, *Le chiese*, pp. 237-238, note 21; and MOCCAGATTA, "Bernardo Antonio Vittone," pp. 66, note 29 on p. 88. On Vittone's wooden furnishings in the sacristy, see OLIVERO, *Miscellanea di architettura*, p. 17; MOCCAGATTA, "Bernardo Antonio Vittone," pp. 66, note 28 on p. 28, fig. 28; and IDEM., "La chiesa dei Santi Martiri," (1971-72), p. 95, note 73. Vittone's connection to the Immacolata Concezione may have owed something to the activity of his father, Giuseppe Nicola Vittone, who in 1696 had commissioned the Cappella del Crocifisso in the Immacolata Concezione. Giuseppe Nicola paid 800 lire for the chapel, which was later replaced by a new altar. But when he died in 1709 he was buried not in the chapel that he had built at the Immacolata Concezione, but in the church of San Carlo.

major altar (1736).⁶⁴ Indeed, it was on Dallamano's recommendation that Vittone came to be awarded the commission at Caramagna in the first place.⁶⁵ Dallamano's frescoes are notable for their striking illusionism. On the dome and pendentives he painted *quadratura* with fictive openings, and on one of the side walls he painted a *trompe l'oeil* that generates a remarkable illusion of spatial extension and complements the actual spatial extension of the chapel facing opposite.⁶⁶ Vittone was duly impressed with Dallamano's art, singling it out for praise in *Istruzioni elementari*:

Noble [painters of perspective] have achieved the most laudable successes. Through knowledge of geometry and the various rules of art, they have reached such perfection that the eye of the person looking at their paintings is very often deceived, unable easily to distinguish the difference between nature and the simple picture. Such an impression can be perceived by those in Piedmont who fix their eyes on the paintings of the virtuoso Giuseppe Dallamano who, in royal as well as in public and private buildings, has convincingly demonstrated his perfect and commendable skill in this art.⁶⁷

⁶⁴ See GALLO, *Storia di Caramagna*; GALLO/GALLO, "La chiesa dell'arciconfraternita," pp. 29-39; CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 28, no. 16; and PROLA/PEYROT, *Architetture Barocche*, un-numbered page (listing under Caramagna Piemonte). Vittone's altar at Caramagna has a close affinity with the high altar that he would later design for the Visitazione at Vallinotto; see PORTOGHESI, *Bernardo Vittone*, pp. 99, 219, pls. 76-77.

⁶⁵ *IBID.*, p. 219.

⁶⁶ The next year, 1736, Dallamano would paint illusionistic frescoes in the interior of Gallo's Confraternity Church of the Annunziata (La Bianca) at Busca; see CARBONERI, *L'architetto Francesco Gallo*, p. 141; pls. 51-52; and *IDEM.*, "Architettura," in *Mostra del Barocco*, I, p. 42, no. 69. Here the dome is equipped with both fictive and real perforations in anticipation of the perforated dome of Vittone's Santa Chiara at Bra. Busca, like the sites of so many other churches by Gallo, is located a short distance from Bra, approximately 35 kilometers (22 miles) to the southwest.

⁶⁷ VITTORE, *Istruzioni elementari*, p. 528: "In sì nobile impegno hanno moltissimi fatto assai lodevole riuscita. Escogitate questi col lume della Geometria, e dell' Arte stessa varie regole, e di lineamenti valendosi e paralleli, e convergenti, e congruamente li colori, ed ombreggiamenti maneggiando, a segno tale si sono in quest' Arte portati, che dalle Opere loro ben spesso ingannato rimane l'occhio di chi le mira, non facilmente discernendo dalle produzioni della Natura, e dalla reale esistenza ciò, che per altro non è, che semplice pittura; cosa che accade a chi nel Piemonte fissa l'occhio nelle Opere del pennello di Giuseppe

Giuseppe Pietro's son and assistant, Nicolò Dallamano, must also have impressed Vittone with his work at Caramagna, for when Vittone was commissioned in 1737 to design the *apparato* for the *Quarant'ore* devotion at Santi Martiri in Turin he selected Nicolò to paint it (Figure 3.34), a vivid example in Vittone's own work of the close connection that existed between the media of *quadratura* painting and stage set decoration.⁶⁸

Giuseppe Pietro Dallamano frequently collaborated with the *figurista*, Michele Antonio Milocco (1690-1772), to paint illusionistic frescoes, in particular on the domes of Plantery's church of the Pietà at Savigliano (1747-49) and Gallo's churches of Santissima Trinità at Fossano (1736) and the Assunta at Carrù (1751), all of which were certainly known by Vittone.⁶⁹ The two painters also teamed up to paint frescoes in the cortile of the Casa Villanis in Turin located next to Santi Martiri, a church for which Vittone was commissioned to do much work.⁷⁰ Milocco himself was an academician

Dallamano, che in più luoghi si veggono sparse sì ne' Regj, che ne' pubblici, e privati Edifizj, dove questo Virtuoso ha dato saggio della perfetta, e commendabile sua perizia in quest' Arte."

⁶⁸ Nicolò Dallamano's role in having painted Vittone's *apparato* is recorded in the caption to plate 99 of *Istruzioni diverse* depicting the *apparato*: "Disegno dell'aparato ordinato in Torino nella Chiesa di MM.RR.PP. della Comp.a di Gesù p. le 40 ore dell'anno 1737 / Dedicato all' R.mo P.re Francesco Retz Prep.o Generale della Medesima Comp.ia / Nicol. Dallemano pinxit modenese / Archit. Vitoni inve. Academi.o. di Roma / Ripa scu." See BAUDI DI VESME, *Schede Vesme*, II, p. 393; and MOCCAGATTA, "Bernardo Antonio Vittone," p. 33, note 3 on p. 55.

⁶⁹ The ceiling fresco of the Pietà depicts *The Triumph of the Cross*. Dallamano also painted illusory, fictive architecture around the major altar of the Pietà at Savigliano; see BAUDI DI VESME, *Schede Vesme*, II, p. 392. On Dallamano and Milocco's collaboration at the Pietà, see BRINCKMANN, *Theatrum Novum*, p. 59, no. 155, pl. 155; A. BONINO, "La chiesa della Pietà di Savigliano," *Bollettino della Società Piemontese di Archeologia e Belle Arti* XVII (1933), pp. 91-101, here pp. 94, 101; and *Guida Touring Club*, p. 255. At the Trinità at Fossano Dallamano and Milocco were succeeded in 1737 by Pietro Antonio Pozzo the Younger and Giovanni Pietro Pozzo. On Dallamano and Milocco's work at the Trinità, see CARBONERI, *L'architetto Francesco Gallo*, p. 163; IDEM., "Architettura," in *Mostra del Barocco*, I, pp. 42-43, no. 71; and BRIGANTI, ed., *La pittura in Italia*, II, p. 840. On Dallamano and Milocco's frescoes at the Assunta at Carrù, see COMOLI/ PALMUCCI, *Francesco Gallo*, p. 207.

trained at the Accademia di San Luca who also painted ceilings in several of Vittone's churches,⁷¹ including figures of putti on the interlaced ribbed vault, now lost, of Vittone's renovated presbytery of Sant'Antonio Abate in Turin (ca. 1750),⁷² the frescoes of *St. Ignatius in Glory* on Vittone's sacristy vault of Santi Martiri in Turin (1751),⁷³ and a *Baptism of Christ* on canvas in one of the chapels of Vittone's Santa Maria di Piazza in Turin (ca. 1754).⁷⁴

Thus by the time that Vittone designed the Visitazione at Vallinotto in 1738, he had worked with Giuseppe Pietro Dallamano and his son, Nicolò, on several commissions. Vittone writes in *Istruzioni diverse* that he had intended the dome of the Visitazione to be painted in a perspectival gradation, but that owing to the haste of construction the work was prevented from being executed in such a fashion.⁷⁵ No doubt Vittone envisioned for the dome of the Visitazione a *trompe l'oeil* of the type that Dallamano had painted on the interior of Santa Croce at Caramagna. As it turned out, the *quadratura* was not executed. Only the figures were painted, the work of Pietro Francesco Guala (1698-1757).⁷⁶ This is the same Guala, who just a few years earlier, about 1734,

⁷⁰ BAUDI DI VESME, *Schede Vesme*, II, pp. 392, 701.

⁷¹ Milocco was educated at the Accademia di San Luca where in 1711 he won first prize in the Second Class competition in painting; see IBID., II, p. 699.

⁷² IBID., II, p. 700. Milocco also painted the main altar.

⁷³ IBID., II, p. 701; MOCCAGATTA, "Bernardo Antonio Vittone," fig. 8; IDEM., "La chiesa dei Santi Martiri," (1971-72), p. 98, fig. 23; CAVALLARI MURAT, "Aggiornamento," p. 493, fig. 43.

⁷⁴ BAUDI DI VESME, *Schede Vesme*, II, p. 700; TAMBURINI, *Le chiese*, p. 381.

⁷⁵ VITTONI, *Istruzioni diverse*, p. 186: "Era mio pensiero, che l'aspetto di tale pitture fosse in degradazione prospettica, ma la fretta dell' esecuzione bramata dal suddetto Signore non permise, che intieramente riuscisse il desiderato effetto dell' Opera." See also ARDUINO/GENTILE, "Itinerari per una lettura," I, p. 98.

⁷⁶ See N. GABRIELLI, "Ultime segnalazioni di opere d'arte in Piemonte," *Bollettino della Società Piemontese di Archeologia e Belle Arti* n.s. XIV-XV (1960-61), pp. 167-168, here p. 168, who was the first to identify Guala as the painter of the Vallinotto dome. See also LUSSO, *Carignano: i*

had painted frescoes in the Palazzo Gozzani di Treville at Casale Monferrato, with Guala responsible for the figures and another painter, Giovanni Battista Bettini, responsible for the *quadratura* (Figure 5.8).⁷⁷ Vittone may well have seen these frescoes when he visited Casale Monferrato in 1737 to design the Ospizio di Carità.⁷⁸ If so, his eye would have been drawn as much to Bettini's as to Guala's work. The identity of the artist who was intended to paint the *quadratura* on the dome of the Visitazione is unknown (Vittone is silent about the matter in *Istruzioni diverse*), but it may have been Dallamano or, given the selection of Guala as the painter of the figures, it may have been Guala's associate, Bettini. As it was, Guala's figures on the dome of the Visitazione are combined not with a painted *quadratura*, but with an architectural, three-dimensional equivalent of *quadratura*, the network of free-spanning, interlaced ribs themselves. In the words of Wittkower:

"luoghi pii," p. 355; and C. CALZA and A. BONCI, *Pietro Francesco Guala a Robaronzino: Capolavori del barocco piemontese in una chiesa di Ciriè* (Santhià, 1998), pp. 23-25. To Guala is also attributed the painting of *The Purification of the Virgin* on the main altar of Vittone's Chapel of the Purificazione di Maria Vergine in the Ospizio di Carità at Carignano; see ARDUINO/GENTILE, "Itinerari per una lettura," I, p. 100, and several paintings, *The Assumption of the Virgin* on the main altar and two oval paintings decorating the walls of the presbytery, in Vittone's church of Santa Maria di Piazza in Turin; see R. CARITÀ, *Pier Francesco Guala* (Turin, 1949), p. 116, no. 18-B, p. 116, nos. 19-B, 20-B, pp. 117-118, no. 5-C; BAUDI DI VESME, *Schede Vesme*, II, pp. 549-550; POMMER, *Eighteenth-Century*, p. 115, note 60 on p. 128; and TAMBURINI, *Le chiese*, p. 381. On Guala, see also N. CARBONERI, "Il Guala e le congiunture tra il Veneto e il Piemonte nel '700," *Arte Veneta* V (1951), pp. 189-191; G. TESTORI, "Introduzione al Guala," *Paragone* V:55 (1954), pp. 23-36; MALLÉ, *L'arti figurative*, pp. 387-390; and S. MARTINOTTI and S. MARTINOTTI, *Pietro Francesco Guala* (Villanova Monferrato, 1994).

⁷⁷ OECHSLIN, "Vittone e l'architettura," pp. 48-49, note 3. Guala and Bettini painted frescoes in various rooms of the Palazzo Gozzani di Treville, including the *scalone*, a *sala*, and the *galleria*. See also CARITÀ, *Pier Francesco Guala*, pp. 36-37, note 41, p. 99, nos. 70-71, pl. XVI; TESTORI, "Introduzione al Guala," pp. 30-31; S. BAZZI, *L'arte a Palazzo Gozzani di Treville* (Casale Monferrato, 1955), fig. 7; BAUDI DI VESME, *Schede Vesme*, II, p. 550; and TORNIELLI, *Architettura di otto secoli*, p. 68, 73, pl. LXI.

⁷⁸ According to POMMER, *Eighteenth-Century*, p. 123, Vittone first visited Casale Monferrato in 1737 when he designed the Ospizio di Carità. Two years earlier, however, Vittone had designed the Chapel of Sant'Evasio attached to the cathedral also in Casale Monferrato, at which time presumably he also visited the town. Still, in either event, whether in 1737 and/or 1735, Vittone would have had occasion to view Guala and Bettini's fresco.

In this early work [at Vallinotto], therefore, the domical structure and the painted decoration cannot be separated. The frescoes constitute an essential complement to the intrinsic meaning of the triple dome.⁷⁹

The same is true of Vittone's proposed dome for Santa Chiara at Alessandria in which only the figures of the celestial glory, but not a *quadratura*, were envisioned to have been painted (Figure 4.49), with the network of interlaced ribs again intended to serve as its own three-dimensional *quadratura*.

It is a formula that Vittone repeated again in his openwork dome of Santa Chiara at Bra, but with a perforated shell instead of a network of interlaced ribs. Again, there is no depiction of a *quadratura* in the ceiling frescoes, only painted figures, the work of Pietro Paolo Operti. The perforated shell again functions as its own three-dimensional *quadratura*. Operti is the same painter who would later collaborate with Pietro Antonio Pozzo the Younger and Gian Domenico Rosso di Busca to paint illusionistic frescoes on the vault of San Bernardino at Saluzzo (1753-55), with Operti responsible for the figures and Pozzo and Rosso di Busca responsible for the *quadratura*.⁸⁰ The fresco depicts scenes of the glorious triumphs of St. Bernardino of Siena and St. Margherita of Cortona set within a feigned architecture painted on the nave vault and on the soffits of the arches. Domes, vaults, and arches are depicted as riddled with perforations, and as superimposed on and opening

⁷⁹ WITTKOWER, "Vittone's Domes," p. 214. See also POMMER, *Eighteenth-Century*, p. 111, who agrees that the decoration of the Visitazione is derived, in part, from *quadratura* painting.

⁸⁰ Rosso di Busca had been a student first of Dallamano and later of Galli Bibiena. On his *quadratura* of San Bernardino at Saluzzo, see MALLÉ, *L'arti figurative*, p. 382; GABRIELLI, *Arte nell'antico*, pp. 27, 205, 215; *Guida Touring Club*, p. 340; MATTEUCCI, *L'architettura del Settecento*, p. 226; BRIGANTI, ed., *La pittura in Italia*, I, p. 56, fig. 59, II, p. 841; and PEROTTO, "Novità," p. 73.

onto one another. The effect is one of fantastic transparency, levity, and airiness.⁸¹ Again the fictive perforations and stacking of shells call to mind the actual perforations and stacking of shells of Vittone's openwork domes.

Operti collaborated a second time with Rosso di Busca to paint frescoes on the vault of the Confraternity Church of the Croce Nera (now the Misericordia) also at Saluzzo (1763), again with Operti responsible for the figures and Rosso di Busca responsible for the *quadratura* (Figure 5.9).⁸² The illusionism of the fresco is extraordinary. Depictions of vaulted shells stacked one atop the other and riddled with perforations produce a striking illusion of spatial complexity, openness, and expansion. The effect is again one of transparency, levity, and airiness. Rosso di Busca's *quadratura* in the Misericordia at Saluzzo, like that in San Bernardino at Saluzzo, postdates Vittone's perforated domes and thus cannot have had a direct bearing on Vittone's ideas. Still, the formal connection between the two is undeniable. Anna Maria Matteucci has posed the matter in terms of a daring competition, undertaken between Rosso di Busca and Vittone, to invent the diaphanous vault with superimposed shells.⁸³

Not far from Saluzzo there is the Sanctuary of the Madonna di Hal at Murazzano whose *quadratura* (Figure 5.10), as first noted by Oechslin, also bears a close resemblance to Vittone's openwork domes.⁸⁴ In its depiction of

⁸¹ GABRIELLI, *Arte nell'antico*, p. 27.

⁸² The church itself, possibly designed by Vittone's assistant, Mario Ludovico Quarini, dates to 1761. On Rosso di Busca's *quadratura*, see IBID., p. 204; and MATTEUCCI, *L'architettura del Settecento*, pp. 227, 266.

⁸³ IBID., p. 266: "...da questi pare staccarsi il piemontese che mostra di avere intrapreso con Bernardo Vittone nella invenzione di diafane volte sovrapposte; così sembra almeno indicare quella bellissima nella Confraternita della Misericordia a Saluzzo."

open, superimposed vaults the *quadratura* in the Madonna di Hal succeeds in optically expanding the rather small and low church in the same way that the perforations and the stacked shells of Vittone's domes expand the height of his churches. Oechslin also identifies a fictive vault in a side chapel of San Salvario in Turin (Figure 5.11), this one with a feigned vertex opening painted in perspective, that is comparable to Vittone's designs for vaults with vertex openings, in particular the semi-domes in San Bernardino at Chieri and the corner vaults of his unexecuted project for an ideal church.⁸⁵ Oechslin observes that the motif, which Vittone repeats in his project for a pyramidal monument illustrated on plate 104 of *Istruzioni diverse*, and in his corridor ceilings of the Collegio dei Gesuiti in Turin (Figure 3.49), takes as its point of departure representations of circular apertures in a number of pictorial sources, including the frescoed ceiling of the Sala degli Orazi e Curiazi on the Campidoglio illustrating the story of Numa Pompilio, the intarsia by Fra Damiano da Bergamo in San Domenico at Bologna, and the decoration of the Villa Imperiale at Pesaro.⁸⁶ It is unclear how or when Vittone would have seen any of these examples, but he most certainly could and would have seen still another example of the motif, Domenico Guidobono's ceiling fresco of *Primavera* in the Palazzo Madama in Turin (1714-20).⁸⁷ Oechslin notes that the

⁸⁴ OECHSLIN, "Vittone e l'architettura," p. 45, note 3, fig. 28-b. See also TAVASSI LA GRECA, *Bernardo Antonio Vittone*, p. 30. On the Sanctuary at Murazzano, see E. BRUNO, "Piemonte e Belgio: il Santuario di Murazzano," *Atti della Società Piemontese di Archeologia e Belle Arti*, XV (1933), pp. 377-414.

⁸⁵ OECHSLIN, "Vittone e l'architettura," figs. 26-c, 27-d. Vittone describes and illustrates his ideal church project in *Istruzioni diverse*, pp. 187-188, pls. 82-83. See also PORTOGHESI, *Bernardo Vittone*, figs. XXX-XXXI.

⁸⁶ OECHSLIN, "Vittone e l'architettura," p. 44, note 2, p. 46, note 1, figs. 20-c, 24-a, 24-c.

⁸⁷ ROMANO, ed., *Torino 1675-1699*, pp. 341-343; GRISERI, ed., *Palazzo Saluzzo*, p. 103, fig. 2 on p. 97; DARDANELLO, ed., *Sperimentare*, pl. 22.

apertures of Vittone's dome of Santa Chiara at Bra belong to the tradition of painted circular apertures starting with Andrea Mantegna's prototype in the Camera degli Sposi in the Ducal Palace at Mantua (1474) and continuing with Agostino Tassi's version in the Palazzo Mattei in Rome.⁸⁸ Vittone's motif is comparable as well to a Bibienesque scenographic study of an open vault conserved in the Houghton Library.⁸⁹

Not only Vittone's open domes, but also his open pendentives owe much to the example of *quadratura*. According to Pommer, Vittone's hollowed-out pendentive recalls most of all "the apertures and deformations that *quadratura* painters like to reserve for this crucial area [of the pendentive]."⁹⁰ Pommer cites as an example the *quadratura* of Francesco Gallo's church of the Trinità at Fossano (1737-38),⁹¹ in which the pendentives are painted to look as though the masonry sheathing has been broken through to reveal a cavity behind (Figure 5.4). Ten years earlier, in 1727, Pietro Antonio Pozzo the Younger had painted the *quadratura* on the pendentives of Gallo's San Giuseppe ("La Misericordia") at Mondovì Piazza in precisely the same manner (Figure 5.12).⁹² Similarly, illusionistically painted pendentives appear in many of Gallo's other churches as well, including the Assunta ("La

⁸⁸ OECHSLIN, "Vittone e l'architettura," pp. 41-42, note 3.

⁸⁹ IDEM., "Il contributo dei Bibiena," p. 142, note 65 on p. 156, pl. 66.

⁹⁰ POMMER, *Eighteenth-Century*, p. 114.

⁹¹ IBID., p. 114, note 50 on p. 127; the painters of these pendentive frescoes were the brothers Pietro Antonio the Younger and Giovanni Pietro Pozzo, with Pietro Antonio misidentified here as Carlo. On the frescoes, see also BRINCKMANN, *Theatrum Novum*, p. 29, nos. 74-75, pls. 74-75; CARBONERI, *L'architetto Francesco Gallo*, p. 163, pls. 65-66; and IDEM., "Architettura," in *Mostra del Barocco*, I, pp. 42-43, no. 71.

⁹² IDEM., *L'architetto Francesco Gallo*, p. 89, note 23, p. 91, pl. 12.

Bianca”) at Busca (ca. 1729),⁹³ San Giovanni Battista at Racconigi (ca. 1730),⁹⁴ Santa Caterina at Garessio (1723),⁹⁵ Santa Maria Margherita at Margarita (1728),⁹⁶ and the Cathedral of San Donato at Mondovì (1744).⁹⁷ In each case the pendentives are illusionistically depicted as having been cut away to reveal an opening beyond, sometimes to a fictive sky, sometimes to an enclosed cavity. These painted pendentives with fictive apertures all predate by a few years, or were contemporary with, Vittone’s own designs for perforated pendentives, including those in his church of San Bernardino at Chieri (1740-44), and those in his two unexecuted projects of the 1730s, one for a parish church “in some very conspicuous place” and the other for Santa Chiara at Alessandria.⁹⁸

By coincidence, Gallo and Vittone’s pendentives are vividly juxtaposed in the interventions that both architects made to the fifteenth-century church of Santi Pietro e Paolo at Mondovì Breo. Gallo’s pendentive, appearing in each of the two chapels erected to either side of the church, is illusionistically perforated by a fictive oval oculus. By contrast, Vittone’s pendentive,

⁹³ IBID., p. 107, pl. 21.

⁹⁴ BRINCKMANN, *Theatrum Novum*, pls. 109-110; CARBONERI, *L’architetto Francesco Gallo*, pp. 110-112, pl. 26.

⁹⁵ IBID., pp. 125-127, pl. 36.

⁹⁶ IBID., pp. 174-176, pl. 70.

⁹⁷ IBID., pp. 195-203, pls. 88-89; COMOLI/PALMUCCI, *Francesco Gallo*, figure illustrated on p. 158.

⁹⁸ The same type of pendentive with fictive perforations also appears in Gallo’s later churches, e.g., the parish church of Sant’Ambrogio at Cuneo (1765) with frescoes by Carlo Bianco and Michele Antonio Milocco (CARBONERI, *L’architetto Francesco Gallo*, p. 88, pl. 7; IDEM., “Architettura,” in *Mostra del Barocco*, I, p. 41, no. 63, pl. 54), and the parish church of the Annunziata at Camerana (1759-72), erected by the master mason, Andrea Scala, on Gallo’s much earlier designs (IDEM., *L’architetto Francesco Gallo*, p. 75, pl. 92).

appearing in the reconstructed crossing bay, is gouged out by an actual cavity.⁹⁹

The combination of pendentive and squinch, the generating idea that led to the formation of Vittone's hollowed-out pendentive in the first place, had been adumbrated, even before Vittone began his independent practice, by the painted decoration in another one of Gallo's churches, San Giovanni Battista at Barge (1728).¹⁰⁰ There the pendentive is painted with a fictive arch that is made to appear as though it springs from the haunches of the adjacent crossing arches to span, in the manner of a squinch, the corner of the crossing (Figure 5.13). The triangular spherical surface of the pendentive is thus illusionistically transformed by paint into the concave conch of a squinch.

The pendentive with feigned perforation that appears in many of Gallo's churches also appears in other provincial Piedmontese churches of the time, namely Santa Caterina at Casale Monferrato (*ca.* 1725),¹⁰¹ the Annunziata at Guarene (1738),¹⁰² and San Grato at Penango (late eighteenth century).¹⁰³ There is also the pendentive in Santa Croce at Cervere (*ca.* 1729) whose fictive aperture is given the same contour, a triangle surmounted by an arch, as that of the actual aperture in Vittone's pendentive of San Bernardino at Chieri.¹⁰⁴

⁹⁹ See IDEM., "Gallo e Vittone," pp. 100-105, figs. 4-5; IDEM., *L'architetto Francesco Gallo*, pp. 57-58, 122-123, pl. 30; *comunità dal medioevo*, pp. 137, 323-327, 333, figs. 8, 12, 21, 24; and COMOLI/PALMUCCI, *Francesco Gallo*, pp. 244-245.

¹⁰⁰ CARBONERI, *L'architetto Francesco Gallo*, pp. 164-174, pl. 67.

¹⁰¹ IDEM., "Architettura," in *Mostra del Barocco*, I, p. 65, no. 178, pl. 161-a; TORNIELLI, *Architettura di otto secoli*, p. 74, pl. XC; PROLA/PEYROT, *Architetture Barocche*, un-numbered page (listing under Casale Monferrato).

¹⁰² IBID., un-numbered page (listing under Guarene).

¹⁰³ TORNIELLI, *Architettura di otto secoli*, pp. 76-77, pl. XCVI.

¹⁰⁴ PROLA/PEYROT, *Architetture Barocche*, un-numbered page (listing under Cervere).

In addition to the type of illusionistic pendentive with a fictive oculus, there is also the type with a fictive hollowed-out cavity. It appears in the *quadratura* of Plantery's two churches at Savigliano, the Assunta and the Pietà, the former painted by Giovanni Battista Pozzo (Figure 5.3), the latter by Giuseppe Pietro Dallamano. In both churches the pendentive is depicted as having a concavity capped by its own coffered domical vault. A similar illusionistic pendentive is encountered in the Confraternity Church of San Rocco (now the Misericordia) at La Morra (*ca.* 1750).¹⁰⁵ In this case the concavity is depicted as opening onto the sky (Figure 5.14). There is also the pendentive in Rosso di Busca's Misericordia at Saluzzo (1763) in which the concavity is painted as opening onto a vault above (Figure 5.9).

This type of illusionistic pendentive finds a direct and immediate correlation with Vittone's hollowed-out pendentive, the *scavo delle vele*. Again, it is noteworthy that the fictive pendentives depicted in the *quadratura* of the Pietà at Savigliano (1747-49) and the Misericordia at La Morra (*ca.* 1750) were executed at about the same time, and in the same general region, as Vittone's hollowed-out pendentives for the Chapel of the Ospizio di Carità at Carignano (1744-49), Sant'Antonio Abate in Turin (1750), Santa Maria di Piazza in Turin (*ca.* 1751-54), and Santi Pietro e Paolo at Mondovì Breo (1755), with the feigned cavity of the painted pendentives having precisely the same form as the actual cavities of Vittone's hollowed-out pendentives. The close chronological and geographical proximity between these fictive hollowed-out pendentives and Vittone's actual hollowed-out pendentive suggests a reciprocal exchange of ideas and influence between the *quadraturisti* and Vittone in Piedmont.

¹⁰⁵ IBID., un-numbered page (listing under La Morra).

In addition to having painted pendentives with feigned openings and cavities, Piedmontese *quadraturisti* also painted the corners of vaults with feigned concavities and oculi, another practice that has parallels with Vittone's conception and development of the *scavo delle vele*. First of all, there is Andrea Pozzo's *quadratura* representing the *Apotheosis of Hercules* painted on the ceiling of the *gran salone* of the Palais Liechtenstein in Vienna (1704-07; Figure 5.15). Its four corners are depicted with deep round cavities that, as noted by Oechslin, anticipate Vittone's hollowed-out pendentives at the Chapel of the Ospizio di Carità at Carignano and Santa Maria di Piazza in Turin.¹⁰⁶ Vittone, however, could hardly have seen Pozzo's *quadratura* in the Palais Liechtenstein since he is not known to have traveled to Vienna. Still, he may have had occasion to see similarly painted corners in Giovanni Battista Crosato's frescoed ceilings in the Palazzina at Stupinigi (1729-31).¹⁰⁷

Crosato also painted feigned circular apertures on the vault corners of the Palazzo Pesaro (Figure 5.16) and the Palazzo Rezzonico (1752) both in Venice, that bear a striking resemblance to Vittone's hollowed-out pendentives.¹⁰⁸ Likewise, there are a number of corner solutions with apertures and niches that display close similarities with Vittone's hollowed-out pendentives, including the perforated corners illustrated in two

¹⁰⁶ OECHSLIN, "Vittone e l'architettura," p. 49, figs. 3-a, 3-b.

¹⁰⁷ GRISERI, "Pittura," in *Mostra del Barocco*, II, pls. 82-a, 82-b.

¹⁰⁸ OECHSLIN, "Vittone e l'architettura," p. 48, figs. 20-a, 21-a; IDEM., "Il contributo dei Bibiena," p. 142; IDEM., "Tra pittura e architettura. Artificiosità e autonomia della scenografia," in D. Lenzi, ed., *I Galli Bibiena: una dinastia di architetti e scenografi* (Bibbiena, 1997), pp. 149-161, here p. 159, fig. 10. Likewise, a surviving fragment of Tiepolo's corner fresco decoration from the destroyed church of Santa Maria di Nazareth in Venice (today conserved in the Accademia di Belli Arti in Venice) is comparable to Vittone's carved-out pendentives and corner treatment of the drum of San Bernardino at Chieri; see IDEM., "Vittone e l'architettura," p. 48, figs. 22-a, 22-b; and LAVIN, "Fischer von Erlach," figs. 21-29.

anonymous eighteenth-century drawings in the Fatio Collection (Figure 5.18),¹⁰⁹ the corner apertures illustrated in a scenographic sketch of a 'royal staircase' by Giuseppe Galli Bibiena,¹¹⁰ a perforated pendentive illustrated in a Bibienesque scenographic study conserved in the Houghton Library,¹¹¹ and the perforated corner depicted in Giovanni Antonio Torricelli's design for a ceiling decoration conserved in the New York Metropolitan Museum of Art (Figure 5.19).¹¹² Finally, there is a corner solution illustrated in an anonymous eighteenth-century design for a soffit decoration, presently conserved in the Cooper Hewitt Museum of Design in New York City, that is capped by its own ceiling section in a manner that closely resembles the autonomous vaulted corner zones of Vittone's open pendentives (Figure 5.20).¹¹³

Oechslin observes that the dichotomy between the pendentive with fictive perforations and the one with actual perforations is even present within Vittone's own work. For example, the pictorial decoration of Vittone's parish church of Santa Maria dell'Assunta at Riva di Chieri features painted representations of perforated pendentives comparable to the actual perforated pendentives of San Bernardino at Chieri.¹¹⁴ Riva di Chieri also features feigned oculi painted at the base of the vault that compare with actual oculi

¹⁰⁹ OECHSLIN, "Vittone e l'architettura," p. 48, fig. 21-b.

¹¹⁰ IBID., p. 48, note 3. See also A. PARRONCHI, and S. ZAMBONI, eds., *Catalogo della mostra di scultura e disegni scenografici del Seicento e Settecento della Accademia di Belle Arti di Bologna* (Bologna, 1968), p. 25, no. 23, fig. 19.

¹¹¹ OECHSLIN, "Il contributo dei Bibiena," p. 142, note 67 on p. 156, pl. 65.

¹¹² IBID., p. 142, note 68 on p. 156, pl. 64; M.L. MYERS, *Architectural and Ornament Drawings: Juvarra, Vanvitelli, the Bibiena Family, & Other Italian Draughtsmen* (New York, 1975), pp. 42-43, note 5, no. 59.

¹¹³ OECHSLIN, "Tra pittura," p. 158, fig. 8.

¹¹⁴ IDEM., "Vittone e l'architettura," p. 46, figs. 16-b, 16-c.

inserted at the base of the vault of San Bernardino at Chieri.¹¹⁵ In both cases, however, the painted version of the perforations followed by many years the construction of the real ones. Vittone's church at Riva di Chieri also features painted apertures in a side chapel vault that are comparable with the perforated dome of Santa Chiara at Bra.¹¹⁶ Indeed, painted perforations on vaults and pendentives are not uncommon in Vittone's architecture. Besides occurring in the Assunta at Riva di Chieri, they occur on the vaults of Santa Maria Maddalena at Foglizzo (1741),¹¹⁷ the vaults of San Gaetano at Nice (1744-49), the vault and pendentives of the Certosa at Casotto (1754),¹¹⁸ and the pendentives of San Nicola at Montanaro (1758).¹¹⁹

In summary, it is in the openwork domes of his centrally planned churches that Vittone translated the fictive perforations and multiple shells of *quadratura* into the actual perforations and multiple shells of three-dimensional architecture. Vittone's translation of *quadratura* into architecture culminated a development that had begun earlier by Gherardi in Rome and the Galli Bibienas in Bologna and other regions of northern Italy. As such Vittone's innovations are to be understood within the context of a wide sub alpine if not transalpine development. And yet it is clear that Vittone also

¹¹⁵ IBID., p. 46, figs. 15-b, 15-c.

¹¹⁶ IBID., p. 48.

¹¹⁷ See IDEM., "Il soggiorno," p. 410, figs. 41-42; and IDEM., *Bildungsgut*, p. 144, note 57 on p. 189, in which Vittone's vault in Santa Maria Maddalena at Foglizzo is compared with De Rossi and Quadri's vault in the Maddalena in Rome.

¹¹⁸ VITTORE, *Istruzioni diverse*, pl. 52. See also FASSINI, *La Certosa*, a source I was unable to consult; CARBONERI, "Architettura," in *Mostra del Barocco*, I, pp. 60-61, no. 157; and PORTOGHESI, *Bernardo Vittone*, pp. 172-173, 225-226, fig. XXC, pl. 217.

¹¹⁹ IBID., p. 152, pl. 257. False windows are also rendered in perspective in the lunettes of Vittone's Planterian vault above the atrium of Palazzo Giriodi at Costigliole Saluzzo (1740); see GABRIELLI, *Arte nell'antico*, p. 199 (bottom figure).

took note of contributions by contemporary *quadraturisti* practicing in Piedmont and applied them to his work. In short, Vittone's innovations occurred within the context of a narrow provincial tradition as well as a wider cosmopolitan one. Indeed, Pommer argues that Vittone's architecture is best gauged by the activities of his provincial Piedmontese contemporaries than by the activities of "the grand masters of European architecture."¹²⁰ In his reference to Piedmontese contemporaries, Pommer no doubt had in mind Plantery, Gallo, Michela, Alfieri, Nicolis di Robilant, Buniva, Quarini, and other provincial architects of the region, but the reference applies as well to the provincial *quadraturisti* of Piedmont who, like Vittone himself, owed a large debt to Andrea Pozzo.

Finally, it is significant that Vittone was trained not as a painter, but as an architect and engineer. His three-dimensionally curved arches that produce such a striking illusionistic effect in his churches, were beyond the technical capacity of either Gherardi, or the Galli Bibienas, or even Juvarra to construct in masonry. The translation of *quadratura* into architecture may have been an idea initially conceived and undertaken by painters and decorators of stage sets, but it was perfected by an engineer. In this effort Vittone followed the examples of Plantery and Guarini, both engineers. Indeed, Vittone was the only one of Guarini's Piedmontese followers to have modeled his domes after *quadratura*, and it is this that again distinguishes Vittone's Guarinesque domes from those of other Neo-Guarinian architects practicing in Piedmont.

¹²⁰ POMMER, Review of *Bernardo Vittone e la disputà*, p. 132.

The Vittonian Dome as Sacred Theater

Transience and Permanence

Vittone treats the theater in an addendum to *Istruzioni diverse* entitled “Theatrical Instructions, or a Brief Discourse on the Form of Modern Theaters.” He explains that the theater is divided into two principal parts: the stage and the auditorium.¹²¹ The stage is a high and eminent place upon which the actors appear, while the auditorium is a large room surrounded on all sides by balconies or theater boxes and equipped with commodious seating for the entertainment of the spectators.¹²² Vittone also discusses visual and perspectival properties as they apply to the arrangement of both the stage and the auditorium. He writes that the stage must be open to give a view to the spectators, its floor inclined towards the auditorium and regulated by the laws of perspectival diminution.¹²³ Moreover, in setting up the stage set it is necessary to regulate the heights of the wings according to the required natural laws of perspectival diminution.¹²⁴ Vittone illustrates two plans of a stage set showing how the wings are established and arranged according to a

¹²¹ VITTONI, *Istruzioni diverse*, p. 203: “In due principale parti dividesi, cioè in Scenario, ed Uditorio.”

¹²² IBID., p. 203: “Il Scenario è un luogo alto, ed eminente, in cui compajono gli Attori per rappresentarvi il proposto Componimento. L’Uditorio è un ampia Sala tutta circondata di logge, o palchetti, e guarnita di sedili per comodo, e trattenimento de’ Spettatori: onde ben consta tale dove esser la situazione di tali parti, che l’una resti totalmente a dirimpetto dell’altra.”

¹²³ IBID., pp. 203-204: “Circondano tali scene per ogni parte (salvo quella d’avanti, che restar dee apertamente per dare ad essa vista dall’ Uditorio) un piano alquanto inclinato verso l’Uditorio, e regolarmente giusta le regole di Prospettiva degradato.”

¹²⁴ IBID., p. 206: “Compiuta in tal modo la pianta del Scenario, passar fa d’uopo alla formazione del profilo, per aver da esso le misure delle altezze, che ad esso Scenario convengono; regolarmente fra loro, secondo le vere, e naturali leggi prospettiche esigono, degradate.”

perspectival diminution (Figure 3.32).¹²⁵ In the second of the two plans, he shows how the wings are obliquely disposed in a manner that makes the field more spacious and the streets more commodious.¹²⁶ The obliquely placed wings are organized around a one-point perspective of a type that closely resembles Carlo Fontana's stage set project for the Teatro Tor di Nona and Andrea Pozzo's many stage sets illustrated in *Perspectiva pictorum*.

As for the auditorium, Vittone requires that it be commodious and acoustically designed for the hearing of voices.¹²⁷ It must also be suitably arranged so that the seating not be too slanted, nor the opening of the stage be too wide, so as to impair the sufficient enjoyment of the stage sets.¹²⁸ All the seats of the auditorium, including those to the sides, are to be situated in such a manner that the stage can be suitably enjoyed without its opening being too wide.¹²⁹ Furthermore, regulating lines should be employed to establish the union of the stage and auditorium.¹³⁰ Vittone places an imperative upon the

¹²⁵ IBID., pl. 108, figs. 1-2.

¹²⁶ IBID., p. 207: "La figura 2, che a questa trovasi nella Tavola stessa accoppiata, dimostra la maniera, in cui si avrebbe a operare, quando si volessero le scene obbliquamente disporre, siccome in alcuni Teatri si pratica, stante il vantaggio, che ha tale disposizione nel metter maggiormente a coperto gli spazi, che rimangono fra le scena; cosa, che dar può campo a praticarvi più spaziose, e per conseguente assai più agiate le strade."

¹²⁷ IBID., p. 208: "Idonea all' opposto scorgesi la seconda al dare opportuna, e comoda la situazione alla maggior parte delle logge, ed al render per tutto la voce distintamente sensibile..."

¹²⁸ IBID., p. 208: "...sconvenevole però, ed incongrua per la troppa obbliquità, che ne avviene alle rimanenti logge, e per il troppo d'ampiezza, che dar conviene all' imboccatura del Scenario per renderne l'aspetto discretamente godibile; accidente questo, che ammetter non si vuole per motivo del troppo grande, e troppo macchinoso apparecchio, che in seguito ne viene delle Scene."

¹²⁹ IBID., p. 209: "V' ha luogo in detta forma ad un assai ragguardevole numero da logge, nè già molte sono quelle, che interamente hanno a restar situate di fianco. Tutto possono discretamente l'aspetto godere del Scenario, senza che di questo si abbia di troppo ad ampliare l'apertura."

spectators' ability to visually enjoy the stage, using words that are similar to those he uses to describe the spectators' ability to visually enjoy the interiors of his openwork churches at Vallinotto and Bra.¹³¹ Indeed, not only these, but all of Vittone's openwork churches may be interpreted as theaters, and in particular sacred theaters, in which the congregational space serves as the auditorium and the dome as the stage, with the perforated shells and concealed windows of the domes corresponding to the wings and the concealed lamps of a stage set.

Vittone began to conceive the openwork dome as a sacred theater sometime during the mid-1730s, shortly after completing his studies at the Accademia di San Luca. It was then that he designed, as part of the Collegio delle Provincie in Turin (1737-38), a scenographic chapel with a perforated dome that was never built but which is known from a plate in *Istruzioni diverse* (Figure 5.21).¹³² It is an octagon in plan with open galleries of a type common to theaters.¹³³ Soon thereafter Vittone designed the Visitazione at Vallinotto

¹³⁰ IBID., p. 210: "Data adunque (Tav. 109. fig. 5.) la linea indefinita OI determinante di lungo in lungo il mezzo del Teatro, se le attraverserà ad angoli retti in A, punto, in cui stabilir si vuole l'unione del Scenario coll' Uditorio..."

¹³¹ IBID., p. 212: "Tutto possono discretamente l'aspetto godere del Scenario [...] a poter quanto più comodamente si può la vista godere del Scenario." Compare this to Vittone's descriptions of the Visitazione at Vallinotto, IBID., p. 186: "...e godere in tal modo coll' ajuto della luce, che vi s'intromette per mezzo di Finestre internamente non apparenti, la varietà delle Gerarchie, che gradatamente crescendo vi si rappresentano in esse Volte..."; and Santa Chiara at Bra, IBID., pp. 184-185: "...con Tribune al di sopra delle Cappelle, e della Porta; alle quali possono le dette M.M. portarsi per mezzo de' Passaggj, che formati vi si sono al di dietro de' Pilastrj; e godere per ogni parte della vista della Chiesa."

¹³² IBID., pl. 37. See PORTOGHESI, *Bernardo Vittone*, p. 166, fig. LXXII; CARBONERI/VIALE, eds., *Bernardo Vittone, architetto*, fig. 86; CAVALLARI MURAT, "Aggiornamento tecnico," fig. 46.

¹³³ PORTOGHESI, *Bernardo Vittone*, p. 166, describes the galleries of the chapel for the Collegio delle Provincie as the "stages of a grand theater" with rays of light penetrating through the perforated dome and the three different levels of the façade. On the resemblance of Vittone's projected chapel to theater designs, see also FALCO/PLANTAMURA/RANZATO, "Le istituzioni," p. 281; BRUGNELLI BIRAGHI/DEL BOCCO, *Un palazzo vittoniano*, p. 52; and STARGARD, "Repression," p. 221, note 30.

(1738-39), a church whose double cage structure and centralized plan closely resembles Andrea Pozzo's designs for thrones and other decorations adapted to the stage. Indeed, the formative post-academic phase of Vittone's career bears striking evidence of Vittone's knowledge of Pozzo's *Perspectiva pictorum*, with both the Visitazione and the *apparati* for the *Quarant'ore* devotion at Santi Martiri in Turin having manifested in their designs Pozzo's influence.¹³⁴

Vittone's dome of the Visitazione is analogous in many ways to a stage set: its multiple, perforated, and superimposed shells produce layers of space in the manner of scenographic wings. For just as the wings of a stage set frame and focus a view for the spectator, all the while concealing as much as they reveal, so too the perforated shells of the Visitazione dome frame and focus the spectator's view, again concealing as much as they reveal. And just as the wings of a stage set are disposed at increasing depth and illuminated with increasing intensity by concealed lamps, so too the stacked triple shells of the Visitazione dome are "disposed at increasing height and illuminated with increasing intensity by windows that are concealed from our view."¹³⁵

The superimposition of perforated shells at Vallinotto contributes not only to the illusion of increased height, but also to the vertical integration of structure and space which is a major theme of Vittone's architecture. This

¹³⁴ Pozzo's influence on Vittone's designs is noted by CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 6, who writes: "...allargando la propria preparazione su trattati similari, anche di carattere prospettico e scenografico, ad esempio, quelli assai diffusi del Pozzo e del Bibiena..."; and by POMMER, *Eighteenth-Century*, p. 7, who writes: "For religious plays in Rome, [Pozzo] painted columnar buildings that look like cages set within cages, a theme of theater scenery in the eighteenth century and one that approximates the double cage of so much open architecture." On Vittone's debt to Pozzo, see also PORTOGHESI, *Bernardo Vittone*, p. 99; CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 12; and OECHSLIN, "Il soggiorno," p. 413, figs. 57-59.

¹³⁵ PASSANTI, "Per Bernardo Vittone," p. 6: "...disposte a crescente altezza, e illuminate con crescente intensità da finastrelle..." See also WITTKOWER, "Vittone's Domes," p. 214.

vertical integration is reinforced by the elimination of the annular cornice and by the downward slant of the entablature, both of which have their source of inspiration in scenography. For just as the boundary between the presbytery and the nave of a church is dissolved by the spilling out of stucco clouds and light rays in the *apparato* for the *Quarant'ore* devotion, so too the boundary between the upper and lower zones of the Visitazione is dissolved by the spilling out of stucco clouds and light rays through vertex openings in the semi-domes of the side chapels. Vittone extends the stucco rays into the spectator's space to enhance the illusion of spatial continuity, and thus to the extent that the upper and lower zones of the church represent respectively the celestial and terrestrial realms, Vittone succeeds in bringing heaven to earth, and earth to heaven.

...for the spectator, the vaults open to a mystic realm of screened views and concealed lights [...] To unite near and far, the spectator's area with the heavenly regions, was the greatest theme of Vittone's art."¹³⁶

It is instructive to compare Vittone's dome at Vallinotto with actual stage set designs for the *Quarant'ore* devotion. One such design is an altar tableau depicting a cloud scene by the Jesuit scenographer, Jean Dubreuil, published in the third volume of *La perspective pratique* (Figure 3.19).¹³⁷ It features a sequence of planar cutouts, perforated in the center and telescopically aligned so that the diameter of each aperture is narrower than the one in front, and back lighted by hidden candles in a manner that contributes to the telescopic effect, each cutout brighter than the one in front

¹³⁶ POMMER, *Eighteenth-Century*, p. 111.

¹³⁷ DUBREUIL, *La perspective pratique*, III, p. 101.

with the backcloth the brightest of all. In a like manner, the Vallinotto dome features a sequence of stacked shells that are perforated at their crowns and telescopically aligned so that the vertex opening of each shell is narrower than the one below, and back lighted by hidden windows, each shell brighter than the one below with the vault of the lantern the brightest of all. Dubreuil's altar tableau is arranged and illuminated so that the spectator's gaze is fixed on a sacred subject beyond, here a representation of the Eucharistic Host displayed on the backcloth. Likewise, Vittone's dome is arranged and illuminated so that the spectator's gaze is fixed on a sacred subject beyond, here a triangular delta signaling the Holy Trinity displayed on the intrados of the lantern vault. In speaking of Dubreuil's stage sets, A. Hyatt Mayor describes them as "peepshows made of cutouts placed one behind the other, like sets of curtains at a Victorian window."¹³⁸ Iand in a similar manner, Sacheverell Sitwell likens the perforated dome at Vallinotto to a "peepshow":

These open ribs are, themselves, painted with flowers and angelic heads, and you look through them to the second dome which is also painted, and through that again into the third, and then into the lantern. It is like a peepshow or some elaborate game of optics.¹³⁹

It is uncertain whether Vittone knew of Dubreuil's stage set designs since he did not own a copy of *La perspective pratique*. More likely, he was aware of Juvarra's design for a stage set decoration conceived along the same lines. It is entitled "Cielo coperto, con Febo in Aria," and represents the heavens with a sequence of planar cutouts painted to appear as clouds (Figure

¹³⁸ MAYOR, *Bibiena Family*, p. 12.

¹³⁹ SITWELL, *Baroque and Rococo*, p. 130.

5.22). Each cutout is perforated at the center, with the openings progressively narrowed, one behind the other, and the planes progressively brightened in a manner that telescopically fixes the spectator's view on the figure of Febo painted on the backcloth.¹⁴⁰ It is the same formula that Dubreuil had employed earlier in his altar tableaux, and the one that Vittone would later adapt to the Visitazione dome.

Vittone explicitly states in his treatise that he devised the shells of the Visitazione dome in such a manner that the spectator might enjoy a view:

...the visitor's glance travels through the spaces created by the vaults and, with the help of light that enters through windows concealed from the interior, enjoys the variety of celestial hierarchies which rise, in a growing crescendo, up the vaults to the very top of the lantern where one sees a representation of the most Holy Trinity.¹⁴¹

Everything then depends upon the visitor's glance, and it was for the express purpose of focusing that glance that Vittone introduced scenographic devices in his church. In establishing a view to be enjoyed by the spectator, Vittone followed the leads of Juvarra and Plantery, both of whom had devised an architecture characterized by the fixing of views. Indeed, the scenographic arrangement of axial alignments and perspectival devices found in the Visitazione is comparable, in particular, to the scenographic arrangements

¹⁴⁰ Stockholm, Museum of the Theater at Drottningholm. See ROVERE/VIALE/BRINCKMANN, *Filippo Juvarra*, pl. 202; VIALE FERRERO, *Filippo Juvarra scenografo*, p. 124, pl. 6.

¹⁴¹ VITTONI, *Istruzioni diverse*, p. 186: "Nel interno pero ella è ad un Piano solo, che formontato va da tre Volte l'una sovra l'altra esistenti, tutte traforate, ed aperte; così che luogo ha la vista di coloro, che si trovano in Chiesa, a spaziare per li vani, che esistono fra esse, e godere in tal modo coll' ajuto della luce, che vi s'intromette per mezzo di Finestre internamente non apparenti, la varietà delle Gerarchie, che gradatamente crescendo vi si rappresentano in esse Volte, e fino alla sommità del Cupolino, ove espressa vedesi la Santissima Triade."

found in Juvarra's Palazzo Birago di Borgaro and Plantery's Palazzo Cavour. Both palaces, it will be recalled, feature an axial alignment of entrance, atrium, passageway, and courtyards that, in combination with perspectival windows and portals, produces a striking scenographic effect. Vittone took this arrangement and adapted it to the centrally planned church, extending the axial alignment of elements vertically in height rather than horizontally in depth. Each shell of the dome is more closed, and its apertures narrower and more centrally focused, than the shell below, with the spectator's view fixed on the lantern vault in much the same way that, at the Palazzo Birago di Borgaro and the Palazzo Cavour, the spectator's view is fixed on the blind portal of the rear courtyard wall. Likewise, the feigned perspectival side chapels of the Visitazione serve the same illusionistic purpose, as do the feigned perspectival windows and portals of both the Palazzo Birago di Borgaro and the Palazzo Cavour.¹⁴²

There is also Santa Chiara at Bra whose domed interior bears a close resemblance to several stage sets designed by Juvarra for the Teatro Ottoboni, notably scenes from *Costantino Pio* (1710) and *Teodosio il Giovane* (1711), both featuring, in precise anticipation of Santa Chiara, open interiors comprised of four diagonally disposed piers with their inner faces rounded in plan according to a circular curvature (figs 5.23-5.25).¹⁴³ Juvarra's stage sets form

¹⁴² In addition, the Visitazione features *coretti* of a type that recalls the *coretti* in Giuseppe Sardi's Santa Maria del Rosario at Marino which have been interpreted by G. CURCIO, "Lo stato della Chiesa. Roma tra il 1700 e il 1730," in Curcio and Kieven, eds., *Storia dell'architettura italiana*, I, pp. 146-183, here p. 168, as representing theater boxes: "...puramente iconografica, mentre la struttura muraria portante partecipa alla sacra rappresentazione trasformandosi in una sorta di apparato scenico e invadendo lo spazio centrale con le proiezioni convesse — quasi palchi teatrali — dei piloni emergenti tra le colonne in corrispondenza degli assi diagonali." To the extent then that Sardi's *coretti* may be understood to function vicariously as theater boxes, so too Vittone's *coretti* may be understood to function in a similar manner.

skeletal structures, again in precise anticipation of Santa Chiara, whose plans suggest configurations that are simultaneously square, circular, and cruciform. Juvarra's stage set for *Costantino Pio* (Figure 5.23), and another set for an atrium in the Teatro Ottoboni (Figure 5.24), are both strikingly similar to Vittone's church in having coupled columns and coupled ribs that rise uninterruptedly from the floor to the crown of the dome imparting an emphatic vertical continuity to the structure. Juvarra's stage set for *Teodosio il Giovane* (Figure 5.25) dispenses with the coupled orders for a solitary order, and the coupled ribs for a solitary rib, but it retains the emphatic vertical continuity of line that identifies it as a precursor of Vittone's church. Another one of Juvarra's stage sets, this one designed as a temple interior for an unidentified opera, features a dome perforated with apertures in a manner that closely anticipates Santa Chiara at Bra.¹⁴⁴ Other stage sets by Juvarra also incorporate perforated vaults in anticipation of Vittone's church, including one with Ancient and Baroque Monuments,¹⁴⁵ one representing "Deliziosa" from Scene III of "Giunio Bruto" (1711),¹⁴⁶ and another for the Teatro Capranica.¹⁴⁷ Still other stage sets by Juvarra feature three-dimensionally

¹⁴³ Turin, Biblioteca Nazionale, Ris. 59.4, fol. 18 (2); London, Victoria and Albert Museum, fol. 1. See VIALE FERRERO, *Filippo Juvarra scenografo*, p. 128, pl. 10-a; p. 146, pl. 28; p. 335, no. 18(6), fig. 18(6). Turin, Museo Civico.

¹⁴⁴ London, Victoria and Albert Museum, fol. 37. See VIALE FERRERO, *Filippo Juvarra scenografo*, p. 227, pl. 109; and S.S. MUNSHOWER, "Filippo Juvarra's Spatial Concepts and Italian Stage Design: The Consummation of a Renaissance Discovery," Ph.D. dissertation, The Pennsylvania State University, University Park, Pennsylvania, 1995, II, fig. V-29.

¹⁴⁵ Turin, Museo Civico. See ROVERE/VIALE/BRINCKMANN, *Filippo Juvarra*, pl. 18 bis; and VIALE, eds., *Mostra di Filippo Juvarra*, fig. 171.

¹⁴⁶ London, Victoria and Albert Museum. See IBID., p. 166, pl. 48.

¹⁴⁷ Turin, Biblioteca Nazionale. See ROVERE/VIALE/BRINCKMANN, *Filippo Juvarra*, pl. 241. There is also Juvarra's stage set representing a "Biblioteca" from Scene VI of "Teodosio il Giovane" for the Teatro Ottoboni (1711) in which circular openings puncture the ceiling in a

curved arches, again in anticipation of those of Vittone's church at Bra.¹⁴⁸ But whereas the arches and shells of Juvarra's stage sets are fabricated out of wood and canvas, those of Vittone's church are fabricated out of masonry.¹⁴⁹

Santa Chiara at Bra manifests, in addition, parallels with ephemeral decorations. Oechslin has identified connections, for example, between Vittone's church and festival machines, notably Paolo Posi's second *apparato* for the *Festa del Chinea* depicting the Temple of Ceres (1756), and the covering of the central pavilion of the 'Fountain' of the Villa Giulia in Rome.¹⁵⁰

Vittone's openwork domes, Oechslin argues, are also explainable in large measure by the "tradition of certain types of architecture of garden casinos and *apparati*," with Santa Chiara at Bra displaying a specific resemblance to Guarini's garden pavilion at Racconigi and to a casino illustrated in Pozzo's treatise.¹⁵¹

Vittone's openwork churches also share affinities with funeral decoration. The perforated domes of the Visitazione at Vallinotto and Santa Chiara at Bra, in particular, are comparable to the perforated canopies of catafalques, most notably those designed by Carlo Fontana for Leopold I and

manner that anticipates the sunken circular panels in the corridor ceiling of Vittone's Collegio dei Gesuiti in Turin (1768-69); see VIALE FERRERO, *Filippo Juvarra scenografo*, p. 152, pl. 34.

¹⁴⁸ These include Juvarra's atrium design for an unidentified opera (London, Victoria and Albert Museum, fol. 72), several designs for Scene X of *Teodosio il Giovane* in Teatro Ottoboni of 1711 (Turin, Biblioteca Nazionale, Ris. 59.4, fol. 124 (1); Florence, Biblioteca Marucelliana), and another design for an atrium (Turin, Biblioteca Nazionale, Ris. 59.4, fol. 109 (1)); see illustrations in MUNSHOWER, "Juvarra's Spatial Concepts," II, figs. V-17, V-24, V-25, V-48.

¹⁴⁹ Vittone's masonry arches, curved in three-dimensions, are the product of a technical skill and expertise inherited from Plantery. And so while the idea for such arches may have owed much to the example of Juvarra's stage sets, its execution owed much to the example of Plantery's palace vaults with three-dimensionally curved ribs.

¹⁵⁰ OECHSLIN, "Vittone e l'architettura," p. 41, note 2.

¹⁵¹ IBID., p. 41, note 2.

Pedro II, which Vittone studied and copied as a student in Cardinal Albani's library.¹⁵² For just as the canopies of Fontana's catafalques are characterized by openness, levity, and airiness, so too are Vittone's domes. Moreover, just as the canopies of Fontana's catafalques take on the form of a suspended crown, the means of support camouflaged and concealed from the spectator's view, so too do Vittone's domes. The suspended crown, a staple of catafalque design and one that Vittone himself employed in a number of his own altar designs, was closely associated with the idea of apotheosis.¹⁵³ To the extent then that the perforated shells of Vittone's domes resemble the crowns of catafalques, they too convey the idea of apotheosis, and indeed the frescoes painted on the outer shell of the dome of Santa Chiara at Bra depict the apotheoses of St. Clare and St. Francis. The crown also conveys the idea of heaven, and thus the triple-shelled dome of the Visitazione at Vallinotto, for example, may be understood to represent the crown of the Holy Trinity.¹⁵⁴

Vittone's idea of transience and permanence, as regards the openwork church conceived as ephemeral decoration, may be elucidated from the pages of *Istruzioni elementari* and *Istruzioni diverse*, the former treatise dedicated to "the Infinite Majesty of the Most High Supreme God," and the latter treatise to

¹⁵² Vittone's dome at Bra also resembles the perforated canopies of several catafalque designs illustrated in Giuseppe Galli Bibiena's *Architettura e prospettive* (1740), particularly plates IV:1-4 and V:1-2, a treatise that Vittone owned and one that was published just two years prior to the commissioning of Santa Chiara. It will be recalled that Giuseppe worked in Piedmont between 1740 and 1742, the very years when *Architettura e prospettive* was published and construction of Vittone's church at Bra was commenced.

¹⁵³ The suspended crown appears, for example, in Vittone's altar for the Sanctuary of Sant'Ignazio near Lanzo, and in his projects for Santa Chiara at Alessandria, a chapel in the Annunziata in Turin, and a chapel in the Certosa of the Valle di Pesio; see PORTOGHESI, *Bernardo Vittone*, pls. 16, 17, 39, 64, 277; CARBONERI/VIALE, eds., *Bernardo Vittone*, figs. 27, 153; and CAVALLARI MURAT, "Aggiornamento," fig. 26.

¹⁵⁴ PASSANTI, "Per Bernardo Vittone," p. 6: "...l'ambiente centrale si apre sul Cielo popolato dalle Gerarchie via via più lontane, che fan corona alla Santissima Trinità..."

“the Great Virgin, the Mother of God, Most Holy Mary.” In *Istruzioni elementari* Vittone describes God as the “Sovereign Architect” of creation.

...You devote yourself as Sovereign Architect to the formation not only of one World, but of as many Worlds as there are creatures comprised in it, and in these same Worlds You gave us the character of light imprinted as the traces of your Art.¹⁵⁵

God constructs not only “one World,” but also “many Worlds,” with the “one World” understood in the Neo-Platonic sense as the Macrocosm, and the “many Worlds” understood as the Microcosm. For just as, in a general sense, the Universe is a work of architecture, so too, in a special sense, the individual human being is a work of architecture — a Temple of the Holy Spirit that is built, demolished, and rebuilt with Divine Grace to be made worthy to shelter the Spirit of God.¹⁵⁶ In short, Vittone resorts to an anthropomorphic theory of architecture founded on a religious value.¹⁵⁷ God is the “unique Archetype of perfection” who constructs universal prototypes by means of which, through a process of imitation, individual beings come to be created.

¹⁵⁵ VITTONI, *Istruzioni elementari*, Dedication, pp. IV-V: “...Voi, che non sdegnando d’applicarvi già qual Sovrano Architetto alla formazione, non dirò già solo d’un Mondo, ma di tanti Mondi, quante sono le creature, che in esso comprendonsi, a noi lasciate ne’ medesimi a caratteri di luce impresa le traccie d’un Arte...” See also FAGIOLO, “L’universo,” pp. 117-118; HENDRIX, *Architectural Forms*, p. 96, note 19 on p. 246.

¹⁵⁶ VITTONI, *Istruzioni elementari*, Dedication, p. VII: “Se in oltre poi dal mistico giova al mistico procedere, tanto più penso impegnato vi troviate a favorevole porgermi la mano, quanto che portando l’Uomo in se stesso il Tempio, in cui abitare si degna la santità del vostro spirito (1. Cor. 3. & 6.); ad ogni modo è d’uopo che, s’egli è vivo, tale per degnazion vostra mantengasi; od altrimenti giusta il precetto, che già ne addossaste al sovramentovato Profeta (Jer. 1. & Eccl. 49.), si distrugga, si rovini, si spianti, e di nuovo riedificandosi colla grazia ed assistenza vostra a perfezione si riduca...” See also FAGIOLO, “L’universo,” pp. 119, 126; and HENDRIX, *Architectural Forms*, p. 97, note 25 on p. 246.

¹⁵⁷ FAGIOLO, “L’universo,” p. 124. Vittone’s anthropomorphic theory of architecture is reiterated in another passage from *Istruzioni elementari* (p. 467) in which he compares the perfected form of a house or palace to that of the human body in its observance of an economy of parts: “Il rapporto, che aver deve una Fabbrica nella perfezion della forma a quella del Corpo umano, vuole che, quale in questo, tale in questa se ne osservi l’economia delle parti.”

To You, Oh Supreme Good, I consecrate the outlines of an Art which inspires works through the imitation of many prototypes seen throughout the Universe and produced by your admirable hand. Humanity surrenders to You, unique Archetype of perfection, in the production of things that You make manifest to our eyes, in some faithful manner...¹⁵⁸

These universal prototypes are the Platonic Forms or Ideas that, as Vittone understands them, are essentially geometrical in nature. As such they are eternal and imperishable. Architecture then is the art of the imitation of divine prototypes in nature. Moreover, the architect builds houses at God's command to mirror that mystical House which, unless God be the one who builds it, they labor in vain that build it.

...You ordered us to erect Fabrics and Houses in which your People found a permanent habitation long before (*Jeremiah* 29:5). Thus, if I am allowed to bring my reflections to that Mystical House which is praised by the Royal Psalmist in his sacred songs (*Psalms* 127:1), I am increasingly made aware of this sacred conception; as I read that You yourself desire to be its Builder and Custodian, and that all is vanity outside your inherently wise operation and shelter.¹⁵⁹

¹⁵⁸ VITTONI, *Istruzioni elementari*, Dedication, p. V: "I lineamenti ... a Voi ò Bene sommo consacro d'un' Arte, per cui, coll' imitare quali altrettanti prototipi le opere, che per l'Universo si veggono dalla tutt' or ammirabile mano vostra prodotte; rendesi l'Uomo a Voi, unico Archetipo di perfezione, nella produzion delle cose, che agli occhi nostri si manifestano, in qualche modo conforme..." See also WITTKOWER, *Architectural Principles*, p. 149; FAGIOLO, "L'universo," p. 126; and HENDRIX, *Architectural Forms*, p. 97, note 24 on p. 246.

¹⁵⁹ VITTONI, *Istruzioni elementari*, Dedication, p. VI-VII: "...ordinando che Fabbriche, e Case s'edificassero, nelle quali lunga il vostro Popolo apparecchiata si trovasse, e permanente l'abitazione (*Jer.* 29.). Che se lecito mi sia quindi i riflessi portare a quella mistica Casa, di cui fece il sovracitato Reale Salmista nelle sacre sue canzoni menzione (*Psalms.* 126.) [sic], vie più aumentarsi in me sento la concepita confidenza: mentre leggo che Voi stesso esser ne volete l'Edificatore, e il Custode, e vana esser fuor della vostra ogni altrui più sagace operazione, e difesa." See also FAGIOLO, "L'universo," p. 119, note 2; and HENDRIX, *Architectural Forms*, p. 97, note 23 on p. 246.

Vittone thus distinguishes between houses built by man and the eternal archetypal House built by God which, if it were to be built by human effort alone, would remain in an incomplete state, since man begins to build, but cannot finish.¹⁶⁰ And yet human habitations, albeit transitory, can inspire and lead the mind to a contemplation and enjoyment of the eternal House.

...it pleases You, Oh Eternal Sun, to turn me, the most unnecessary among your creatures, into one of your resplendent rays. Better yet, it pleases You to do so to all of us who, with Christian sentiment will read the present architectural sages so that, by meditating on these transitory buildings (*caduche Fabricche*), we are made worthy, by your mercy, to contemplate and enjoy the eternities of Heaven.¹⁶¹

Vittone adds that the human mind cannot discern God's designs directly, but must rely indirectly upon sense perception by means of which it ascends to perceive, contemplate, and take pleasure in them.

The reasonable person, disdaining foolishness and blindness, confesses that his mind cannot rise as to discern the inaccessible and most noble designs of that Uncreated Mind. Thus one, stupefied and keen to learning, focuses attentively on things fabricated by the Divine hand, in which harmonious proportions and order and just arrangement of parts provide pleasure as one contemplates them.¹⁶²

¹⁶⁰ VITTONI, *Istruzioni elementari*, Dedication, p. VII: "...onde per l'inadempimento, in cui si rimarrebbe cotanto Edifizio, se all' Uomo solo lasciata ne fosse la condotta, non abbiano gli empj nimici vostri a gloriarsene con dire: *hic Homo cæpit ædificare, & non potuit consummare* (Luc. 14)," See also FAGIOLO, "L'universo," pp. 119, 126; and HENDRIX, *Architectural Forms*, p. 97, note 25 on p. 246.

¹⁶¹ VITTONI, *Istruzioni elementari*, Dedication, p. VIII: "...piaciavi ò Sole Eterno di far sopra la più inutile, che fra le creature io sono, uno de' raggi vostri risplendere; anzi non già tanto sopra di me, quanto anche sopra tutti coloro, che con Cristiano sentimento leggeranno li presenti Architettonici saggi; sicchè dalla meditazione di queste caduche Fabbriche fatti siamo degni, per mercè vostra, di passare a contemplare, e contemplando godere le eterne del Cielo..." See also FAGIOLO, "L'universo," p. 125.

¹⁶² VITTONI, *Istruzioni elementari*, p. 8: "Ma chi ha fior di senno, siccome di codesti spiriti la sciocchezza, e cecità detestando confessa, che l'intelletto suo non può sì alto levarsi, che arrivi

This process, the material and the transitory leading the spectator to contemplation of the spiritual and the eternal, is the anagogical sense described centuries earlier by the Pseudo-Dionysius and other medieval Neo-Platonic theologians.¹⁶³ It is also described by the Jesuit priest, Emanuele Tesauro, in his treatise on rhetoric, *Il cannocchiale aristotelico* (1663), a book that Vittone owned.¹⁶⁴ Tesauro explains that the language of God in the Sacred Scriptures, like Divine Wisdom itself, is revealed by way of symbols.¹⁶⁵ At the low and common level the Scriptures are understood in a literal sense, in which the intellect is informed in the same way that the ear is informed.¹⁶⁶ At a higher and uncommon level the Scriptures are understood in a metaphorical sense, in which three manners of figured symbols reveal the divine secrets, and these are the tropological, the allegorical, and the anagogical senses, all of which are metaphors.¹⁶⁷ The highest of these, the anagogical sense, is that

a discernere gl' inaccessibili, e nobilissimi disegni d' una mente increata, così tratto da maraviglia, e da vaghezza d'apprendere, fissando attentamente lo sguardo nelle cose dalla Divina mano fabbricate, non solo la loro inimitabile proporzione, e l'ordine, e il giusto collocamento delle parti si compiace di contemplare..." See also FAGIOLO, "L'universo," p. 126.

¹⁶³ On Vittone's awareness of Christian theories of illumination as expounded by religious thinkers and mystics such as Clement of Alexandria, St. Augustine, the Pseudo-Dionysius, St. Bernard of Clairvaux, St. Bonaventure, St. Teresa, and St. John of the Cross, see IBID., pp. 126-127.

¹⁶⁴ On the listing of Tesauro's book in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 251, no. 729.

¹⁶⁵ TESAURO, *Il Cannocchiale*, p. 59: "...la Divina Sapienza si rivela a' Sapienti per via di Simboli, & si Arguti Enimmi. Tal' è dunque il linguaggio di Dio nella Scrittura Sacra."

¹⁶⁶ IBID., pp. 59-60: "Peroche i precetti necessari alla salute, furono veramente promulgati con piano & aperto stile, che da qualunque huomo incapace di dottrina si potesser capire: come non occides. Non furtum facies: che tanto suonano all'intelletto, quanto all'orecchia: & questa è il senso letterale."

¹⁶⁷ IBID., p. 60: "Ma le cose più alte & peregrine ci vengono copertamente scoperte, & adumbratamente dipinte à chiaro oscuro, con tre maniere di Simboli Figurati; che da' Sacri Suolgitori de' Divini arcani, greamente chiamar si sogliono Senso Tropologico, Allegorico, & Anagogico; mà tutti son Metaforici."

which metaphorically mimics some secret of celestial and eternal things, guiding the mind from visible to invisible objects, and guiding it from this to the other life.¹⁶⁸ In this way corporeal light, the most pleasant and agreeable object to the sight, is translated into incorporeal things.¹⁶⁹

Vittone, who appears to have been appreciably influenced by Tesauro's thought, draws a vivid illustration of the anagogical sense in the frontispiece to *Istruzioni elementari* (Figure 1.17).¹⁷⁰ There a half-nude female figure personifying "*Architettura*" is situated in the foreground, seated atop a ruined Classical capital in a semi-reclined position with the instruments of the architect's profession, the compass and the square, strewn on the ground about her feet. A child personifying "*Disegno*," possessed no doubt of talent and genius but wholly lacking in knowledge and experience, accompanies her to her left. "*Architettura*," by contrast, is depicted as a maiden well versed in both theory and practice, schooled in history, and knowledgeable of the first principles of nature. With upraised arm and pointed finger she directs the gaze of her young charge towards the scene of ruined piles beyond — the Colosseum, a tetrastyle temple, a triumphal column, and an Egyptian obelisk — overgrown with vegetation and, in the case of the Colosseum, capped by a medieval tower, itself also crumbling into ruins and cloaked in vegetation.¹⁷¹

¹⁶⁸ IBID., p. 61: "Argvtie Anagogiche, ò trahenti ad alto; son quelle che metaforicamente motteggiano alcun segreto delle cose Celesti & eterne: guidando la mente dagli obietti visibili agli' nuisibili; & da questa all' altra vita." See also NOEHLES, "Scenografie," p. 154.

¹⁶⁹ TESAURO, *Il Cannocchiale*, p. 313: "Ma principalmente dalla Luce, obietto più gradito alla vista, si deriuano Translati nobili & illustri alle cose incorporee..."

¹⁷⁰ The impact of Tesauro's thought on Vittone was first examined by PORTOGHESI, *Bernardo Vittone*, pp. 14-17. See also QUAGLINO PALMUCCI, "Bernard-Antoine Vittone," pp. 388, 399, note 8 on p. 400; and CANAVESIO, "Presenze gesuitiche," p. 284.

The accretion of overgrowth, both natural and artificial, together with the ruined state of the monuments themselves, give concrete and unmistakable expression to the theme of the passage of time.¹⁷² And indeed, although they are constructed of solid stone and built to endure for the ages, the Roman monuments are presented as the fleeting “transitory buildings” to which Vittone refers in the Dedication to *Istruzioni elementari*.¹⁷³ The allegorical figure of “Architettura” points to the ruins beyond, and while she no doubt is busy teaching her pupil a lesson in history, she is also teaching him a lesson in the first principles of nature. The key to interpreting the scene is the tapered rocky spire in the background positioned directly under the outstretched hand of “Architettura.” This is a “natural column,” so to speak, that serves as nature’s own paradigm by which all the various man-made columns illustrated in Vittone’s frontispiece — the freestanding column, the pier, the engaged column, the pilaster, the obelisk, the historiated column, the triumphal column — take their form and measure.¹⁷⁴ Architecture, as Vittone defines it, is the art of the imitation of divine archetypes in nature.¹⁷⁵ Thus it is

¹⁷¹ The combination of ancient and medieval buildings is also to be found in one of Juvarra’s architectural fantasies; see ROVERE/VIALE/BRINCKMANN, *Filippo Juvarra*, pl. 23. See also FAGIOLO, “L’universo,” p. 129.

¹⁷² The theme of the passage of time, it will be recalled, also informs Vittone’s project for a fountain in a large urban square published in *Istruzioni diverse*, pp. 163-164, pl. 35.

¹⁷³ VITTONI, *Istruzioni elementari*, Dedication, p. VIII: “...di queste caduche Fabbriche...”

¹⁷⁴ FAGIOLO, “L’universo,” p. 129, describes the tapered rocky spire in Vittone’s frontispiece as a “naturalized” obelisk. The preponderance of vertical “archetypes” in the frontispiece suggests to Fagiolo that Vittone deliberately posited a Historical-Natural dialogue between the Egyptian obelisk, the Roman triumphal column, and the medieval tower, on the one hand, and the rocky spire, on the other.

¹⁷⁵ VITTONI, *Istruzioni elementari*, Dedication, p. V: “...a Voi ò Bene sommo consacro d’un’ Arte, per cui, coll’ imitare quali altrettanti prototipi le opere, che per l’Universo si veggono dalla tutt’ or ammirabile mano vostra prodotte; rendesi l’Uomo a Voi, unico Archetipo di perfezione, nella produzion delle cose, che agli occhi nostri si manifestano, in qualche modo conforme...” See also FAGIOLO, “L’universo,” p. 126.

not so much the individual ruined buildings, nor even the individual natural outcroppings of rock, to which the allegorical figure of “*Architettura*” in Vittone’s frontispiece points, as to the universal Platonic Forms that underlay them, the geometrical and eternal archetypes that are the sphere, the cube, the cone, the cylinder, the prism, and the pyramid as well as the musical proportions that regulate the whole and the parts.

The lesson of the ruined Roman Forum is aptly described by the German Jesuit, Athanasius Kircher, who a century earlier had surveyed the very same ruins.

There is nothing, unless it be eternal, that can be stable and lasting... Indeed, you see, horrified, what are but the lonely corpses, scattered everywhere, of once flourishing and powerful cities, you will marvel at what today are no more than chaotic heaps of stones, from villas and palaces built with supreme magnificence for every practice of pleasure, and where once there were the delightful retreats of Emperors, today you will observe the dens of beasts, serpents, owls, overgrown by thorns and thistles, and with wonderment you will discern that structures to last an eternity have in the course of a few centuries fallen into endless ruin; thus in this frailty of corrupt life nothing comes our way that is so splendid, magnificent, powerful, and strong that it should not be regarded as momentary in its destiny to change.¹⁷⁶

Vittone’s frontispiece to *Istruzioni elementari* may be understood thus to function as a beacon leading the spectator from the observation of fleeting fabrics to the contemplation of divine archetypes, or, to repeat Vittone’s own words, “by meditating on transitory buildings the spectator is made worthy to contemplate and enjoy the eternities of Heaven.”¹⁷⁷ Vittone’s own *Visitazione*

¹⁷⁶ A. KIRCHER, S.J., *Latium* (Amsterdam, 1671), Preface, cited in English translation in I.D. ROWLAND, *The Ecstatic Journey: Athanasius Kircher in Baroque Rome* (Chicago, 2000), p. 96.

at Vallinotto, to give an example, is a “transitory building” destined in time to fall into ruin. But by meditating on it the visitor is led to contemplate and “enjoy the variety of celestial hierarchies.”¹⁷⁸ This is the anagogical sense described by Tesauro by which the mind is guided from visible to invisible objects.

Vittone continues this train of thought in his second treatise, *Istruzioni diverse*, that he dedicates to the Virgin Mary. He explains that such a dedication is entirely fitting since architecture is the art most properly associated with the Virgin and one especially dear to her, for it is she who assists God in constructing the Cosmos.¹⁷⁹

Whence it is written about You, oh Sovereign Lady, that in the beginning, when this elementary Machine was being founded and You were assisting in the Divine Maker’s work (*Proverbs* 8:30), the structure of that mystic house which is supported by seven columns, was made by Your hand (*Proverbs* 9:1).¹⁸⁰

Not only does the Virgin Mary assist God in fabricating the Cosmos, she assumes the very attributes of architecture itself.¹⁸¹ In imagery drawn from

¹⁷⁷ VITTONI, *Istruzioni elementari*, Dedication, p. VIII: “...sicchè dalla meditazione di queste caduche Fabbriche fatti siamo degni, per mercè vostra, di passare a contemplare, e contemplando godere le eterne del Cielo...” See also FAGIOLO, “L’universo,” p. 125.

¹⁷⁸ VITTONI, *Istruzioni diverse*, p. 186: “...e godere in tal modo [...] la varietà delle Gerarchie...”

¹⁷⁹ VITTONI, *Istruzioni diverse*, Dedication, pp. IV-V: “...non lasciano però d’appartenervi, stante che lineamenti eglino sono d’Architettura; lineamenti vale a dire d’un Arte, la quale non senza ragione dir puossi propria a Voi essere, e specialmente diletta.”

¹⁸⁰ IBID., Dedication, p. V: “Imperciocchè di Voi, o Altissima Signora, si legge aver fin da principio, allorchè questa elementar Macchina fondando stavasi, atteso in un col Divin Facitore ad architettarla, le cose tutte componendo (*Prov.* 8.30.), ed opera esser stata della sapientissima mano Vostra la Fabbrica di quella mistica Casa, cui sette reggono le colonne da Voi stessa operate (*Prov.* 9.1.)” The seven columns erected by Divine Wisdom are mentioned again in the same treatise, IBID., p. 321: “...sette le colonne lavorate dalla Divina Sapienza...” See also FAGIOLO, “L’universo,” p. 124.

¹⁸¹ Vittone’s differentiation between God as sovereign Architect who conceives the Idea of the Cosmos, and the Virgin Mary as artisan and God’s assistant whose hand brings the Divine

the *Song of Songs*, Vittone explains that Mary is both the happiest wall upon which a silver fortress is built and the most fortunate door made of noble cedar planks.¹⁸² Vittone deems his own church designs, which he illustrates in the treatise, to be symbolic representations of Mary herself:

Being the designs included herewith mostly refer to church constructions, it is unavoidable that they symbolize that dignity we can admire in You as the one who has been chosen to serve as that living Temple containing the Tabernacle wherein the universal Creator inhabits, whence You were honored at the same time with the name of Daughter, Mother and Spouse of God (*Luke 1:35*)...¹⁸³

Moreover, Vittone regards these church designs not as his own, but as the Virgin Mary's creation:

Though unnecessary, I want to add that wherever my thoughts may lead me to think that this is a creation of my own ingenuity, You are in reality the maker of this all (*Wisdom 8:6*).¹⁸⁴

Idea of the Cosmos into existence, stems from his definition of architecture as consisting of two parts, Design and Construction, a dichotomy first articulated by Leon Battista Alberti. Design, the Idea of the building by which all its members and their forms are conceived and determined, is the work of the architect. Construction, the engagement and joining together of materials to give the conceived building its actual existence, is the work of the artisan. Thus God designs the Cosmos and the Virgin Mary constructs it.

¹⁸² VITTONI, *Istruzioni diverse*, Dedication, p. V: "Aggiungo l'esser Voi quel Muro cotanto felice, sovra cui gli eterni spiratori, qual sorella rimirandovi (*Cant.* 8.8.), come quella, in cui di virtute l'insuperabil Monte concentrasi, (*Eccl.* 26.24.) fortezze decretarono edificarvi d'argento (*Cant.* 8.9.); Voi esser quella fortunatissima Porta con tavole di nobil cedro dagli spiratori stessi destinata commettersi." See also FAGIOLO, "L'universo," p. 124.

¹⁸³ VITTONI, *Istruzioni diverse*, Dedication, p. V: "Aggiungo, che essendo i Disegni, che quivi contengono, per lo più di Fabbriche di Chiese, così come in queste, a meno far non si può, che in quelli ancora al vivo simboleggiata dimostrisi quella Dignità, che in Voi sì altamente, e con tanta gloria Vostra si ammira nell'esser stata prescelta a servir, qual Tempio vivo di Tabernacolo, in cui Umanato abitasse il Vostro, il mio, l'universal Creatore: onde oltre a quello di Figlia, il pregio a conseguire veniste di Madre, e di Sposa insieme di Dio (*Luc.* 1.35.)." See also CAVALLARI MURAT, "L'architettura sacra," p. 35; and FAGIOLO, "L'universo," p. 123.

¹⁸⁴ VITTONI, *Istruzioni diverse*, Dedication, p. VI: "Aggiungo ... Ma, a che sto sifatti motivi adducendo? E dove mai, meschino me, lo stolto mio pensiero trasportami; mentre parto suppongo del mio ingegno ciò, di cui ne siete Voi, più che io stesso, l'Artifice (*Sap.* 8.6.)."

Vittone thus presents his church designs not only as symbolic representations of Mary, but also as the very product of her artifice.¹⁸⁵ It is not surprising then that a good number of Vittone's churches — Santa Maria della Neve at Pecetto, Santa Maria della Visitazione at Vallinotto, the Chapel of the Purificazione di Maria Vergine in the Ospizio di Carità at Carignano, Santa Maria dell'Assunta at Grignasco, Santa Maria di Piazza in Turin, Santa Maria Maggiore at Mondovì, and Santa Maria dell'Assunta at Riva di Chieri — were dedicated to Mary. And of these, all but Santa Maria della Neve at Pecetto were designed on a centralized plan, a plan type which, since the time of the Renaissance and earlier, had come to be closely associated with the Marian cult.¹⁸⁶ And while Vittone himself does not draw an explicit connection between the centralized form of his Marian churches and the Marian cult, he draws an implicit one in his reference to the Virgin as a Tabernacle, a vessel that, in its material form as an altar furnishing, was typically constructed on a centralized plan.

In its liturgical sense, as an altar furnishing, the tabernacle is understood to be the residence of the Eucharist, the dwelling place of God in the form of the Sacrament. But in its etymological sense, the word "tabernacle" is derived from the Latin word "*tabernaculum*" meaning "tent," a reference to the original Hebrew tabernacle that functioned as a "portable Meeting Tent" which the nomadic Hebrews erected, dismantled, transported,

¹⁸⁵ FAGIOLO, "L'universo," p. 124: "La 'Gran Madre,' però, oltre che opera simbolica di architettura è essa stessa artifice a quasi 'Grande Architetta'."

¹⁸⁶ On the close connection between the centralized church and the Marian cult in Italy during the time of the Renaissance, see S. SINDING-LARSEN, "Some Functional and Iconographical Aspects of the Centralized Church in the Italian Renaissance," *Acta ad Archaeologiam et Artium Historiam Pertinentia* II (1965), pp. 203-252; and C. CONFORTI, "Cupole, chiesa a pianta centrale e culto mariano nel rinascimento italiano," in C. Conforti, ed., *Lo specchio del cielo: Forme significati tecniche e funzioni della cupola dal Pantheon al Novecento* (Milan, 1997), pp. 67-86.

and re-erected throughout their wanderings in the desert. Within the Meeting Tent were two chambers, an inner chamber and an outer one, separated one from the other by a veil, with the inner chamber, the “Holy of Holies,” containing the Ark of the Covenant regarded as God’s dwelling place on earth. Both tent and veil are fashioned out of cloth — an ephemeral, transient material — the same material out of which ephemeral and scenographic decorations of the seventeenth and eighteenth centuries were typically fabricated. Indeed, all such tabernacles made by human hands are perishable, whether they be fashioned out of cloth to house the Ark of the Covenant or out of metal or some other material to house the Sacrament. These material tabernacles are understood, however, to be representations of the imperishable living Tabernacle, the one true Tabernacle not made by human hands, sometimes identified as Holy Wisdom, sometimes as the Human Soul,¹⁸⁷ and sometimes as the Virgin Mary herself within whose womb the divine Creator comes to inhabit.¹⁸⁸ Whereas tabernacles fabricated by human hands are temporal, the living Tabernacle fabricated by God is eternal, that is to say timeless.

Vittone himself appreciated this point, having drawn a distinction, as we have seen, between the transitory buildings made by human hands and the eternities of Heaven. In designing his church buildings in the manner of ephemeral and scenographic decorations Vittone underscored their fleeting character. They are transitory fabrics, but in symbolizing the Virgin Mary

¹⁸⁷ VITTONI, *Istruzioni elementari*, Dedication, p. VII: “...che portando l’Uomo in se stesso il Tempio, in cui abitare si degna la santità del vostro spirito (1. Cor. 3. & 6.)...”

¹⁸⁸ IDEM., *Istruzioni diverse*, Dedication, p. III: “Se alcun bene per avventura può in Terra l’Umana industria produrre, di lassù certamente, ove in trono profondamente adorabile in un col Divin Figlio state l’Universo reggendo...”

they point to eternity. In the case of the Visitazione at Vallinotto, Vittone pointedly tells us that the transitory shells of the dome lead directly to enjoyment of the variety of eternal hierarchies.¹⁸⁹ In the words of Sitwell:

There, something transitory was given the same permanence as the eternities he was trying to depict by breaking through a false dome into a higher one, and into another beyond that, and then into the lantern. And in the end, [...] the four domes at Vallinotto are theatre or artifice...¹⁹⁰

It is significant then that Vittone dedicated *Istruzioni diverse*, in which so many of his designs for Marian churches appear, to the Virgin Mary, and this precisely “because she is the living symbol of the function that the churches have of receiving God as in a tabernacle.”¹⁹¹

It was the academician, Giovanni Battista Contini, who, it will be recalled, specified that buildings are fundamentally different from decorations in that “they require greater solidity, grandiosity, majesty, and nobility.” Contini was reacting to and resisting a trend in Italian architecture that, by the end of the seventeenth century and for the first decades of the eighteenth century, had come to emphasize optical and scenographic effects even to the point that buildings often resembled stage sets themselves.¹⁹² Krufft writes:

¹⁸⁹ IBID., p. 186: “...tre Volte l’una sopra l’altra esistenti, tutte traforate, ed aperte; così che luogo ha la vista di coloro, che si trovano in Chiesa, a spaziare per li vani, che esistono fra esse, e godere in tal modo coll’ ajuto della luce, che vi s’intromette per mezzo di Finestre internamente non apparenti, la varietà delle Gerarchie...”

¹⁹⁰ SITWELL, *Baroque and Rococo*, p. 132.

¹⁹¹ CAVALLARI MURAT, “L’architettura sacra,” p. 35: “...perchè essa è simbola vivo della funzione che hanno le chiese di accogliere Iddio come in tabernacolo.”

¹⁹² Yet even Contini himself, as we have seen, employed the perspectival window in his design for Sant’Agostino at L’Aquila (1707-17) to generate a scenographic effect.

At the end of the seventeenth century one may in general observe a shift of interest towards the depiction and optical effect of architecture. Architecture consequently begins to resemble stage decoration, which made systematic use of such optical effects, and buildings often acquire the appearance of stage-sets; a good example is Filippo Raguzzini's Piazza S. Ignazio in Rome (1725-36).¹⁹³

In resisting this trend Contini asserted that buildings are substantial and imposing in a way that decorations are not. Barbara Chabrowe summarizes his position this way: "...architecture by definition is meant to be permanent, to serve a practical and also aesthetic purpose over an indefinite period of time."¹⁹⁴ It is a vision of architecture that was first advanced by Vitruvius, namely that buildings must be built with as much regard for durability (*firmitas*) as for convenience (*utilitas*) and beauty (*venustas*).¹⁹⁵ In short, buildings, as commonly understood, are erected to be permanent whereas decorations are not. Moreover, a building must look like the thing that it is, not something other than it is, a principle that applies to the whole as well as to the parts. Contini is adamant on this point: "Façades of churches must not be decorated like those of palaces, nor should houses have entryways like monasteries, nor should rooms be decorated in a style suitable to altars..."

But it was precisely the blurring of the distinction between buildings and decorations that characterized the architectural approach of Vittone, and not just of Vittone, but of certain other academicians before him, notably Gherardi and Juvarra, who conceived church buildings as open, airy, and diaphanous structures that evoke the lightness and charm of temporary

¹⁹³ KRUFT, *History*, p. 194.

¹⁹⁴ CHABROWE, "On the Significance," p. 385.

¹⁹⁵ VITRUVIUS, *The Ten Books*, I, iii, p. 17.

decorations. And so Vittone's openwork churches take on an insubstantial and delicate quality in opposition to the substantial and imposing quality that Contini required of buildings. Moreover, they are made to look like ephemeral and scenographic decorations themselves — catafalques, thrones, and *apparati* for the sacred theater — again in opposition to Contini's requirement that a church look like a church and nothing else.¹⁹⁶

[Vittone] saw churches as festive tabernacles suitable to the "Majesty of God." And his churches were elegantly regal and fancifully amazing thrones, just as elegant and fanciful as "*apparati*" for monstrations and processions of that time were intended to rouse in the populace enthusiasm and fervor for prayer.¹⁹⁷

Moreover, just as catafalques, thrones, and *apparati* for the *Quarant'ore* devotion are frequently arranged as a structure within a larger structure, so too are Vittone's openwork churches.¹⁹⁸

¹⁹⁶ Still, the fashioning of churches in the manner of tabernacles and thrones was nothing new. The practice occurs in medieval architecture, for example, with Sainte-Chapelle in Paris having the form and function of a reliquary.

¹⁹⁷ CAVALLARI MURAT, "L'architettura sacra," p. 36: "Egli vedeva i templi come tabernacoli festosi adatti alla 'maestosità d'un Dio.' E le sue chiese erano troni elegantemente regoli e fantasiosamente stupefacenti, come eleganti e fantasiose necessitava fossero a quel le 'macchine' per ostensioni e processioni, destinate a suscitare nel popolo entusiasmo e fervore di preghiera."

¹⁹⁸ The inner structure of Vittone's Santa Chiara at Bra, for example, is comparable in many ways to Bernini's Baldacchino. For just as the Baldacchino is inserted into the envelope of St. Peter's Basilica, occupying and defining a space within a space, so too the inner structure of Vittone's church is inserted into an envelope, occupying and defining a space within a larger space. But where the Baldacchino is entirely separate from the envelope of St. Peter's Basilica, the inner structure of Vittone's church is connected to its envelope, intersecting it at key nodal points. Santa Chiara at Bra also displays similarities with other baldachins. The inner shell of its dome is perforated with four apertures in precisely the same manner as the canopy of the ciborium in Juvarra's Venaria Reale. See OECHSLIN, "Vittone e l'architettura," p. 41, note 3, who observes that the perforated vault at Bra recalls analogous solutions formed by small chapels and ciboria, including the representation of a tempietto with a perforated vault on Vincenzo Onofri's monument of Cesare Nacci, bishop of Amelia, in San Petronio at Bologna (1504); the ciborium in the atrium of San Pietro ad Aram in Naples (1711); the chapel of San Giovanni Nepomuk next to the Schönborn in Austria by Lucas von Hildebrandt (1733); the

In blurring the distinction between temporary decoration and permanent architecture, Vittone applied the same standards to both. Vittone states that the rules and principles necessary to produce elegant and gracious buildings also hold true, and must be observed, for decorations, and especially for thrones and altars erected as stage sets on the occasion of the *Quarant'ore* devotion.¹⁹⁹ Stage sets for the *Quarant'ore* devotion ought to be gracefully sized and proportioned, in whole and in part, with respect to the size and proportions of the church they occupy,²⁰⁰ just as, in the same way, buildings themselves ought to be agreeably and pleasantly proportioned.²⁰¹ Stage sets for the *Quarant'ore* devotion ought also to be designed in the style of the church they occupy,²⁰² just as, in the same way, new additions to buildings ought to be designed in the style of the older edifice to which they are appended (a requirement that governs, for example, Vittone's two projects for

Capilla del Pilar in Nuestra Señora del Pilar at Saragossa by Ventura Rodriguez (1753).

¹⁹⁹ VITTORE, *Istruzioni diverse*, p. 196: "Da quanto, di sì grande varietà trattando di Fabbriche, si è fin qui andato dicendo ben credo, che possa ora mai esser il Leggitore persuaso non darsi in esse leggiadria plausibile senza l'osservanza di certe massime, o regole, che il buon gusto suole, e la ragione stessa in ogni, e qualunque caso prescrivere. E se Fabbrica non v'ha, qualunque ella sia, in cui non si possa da tali massime, o regole prescindere, senza che ella fuori portisi dei termini d'un onesta aggradevole comparsa; di necessità fra le altre assolutamente sia ciò intendere di quelle, che destinate sono a servire, dirò così, di Trono alla Maestà d'un Dio, che sugli Altari, in occasione massimamente di Sacre Quarant'ore si espone."

²⁰⁰ IBID., p. 196: "Ora le regole, o massime almeno più importanti, che fra le altre a me pajono doversi dall' Architetto osservare, per ben disporre tali sorta di Macchine, od Ornamenti, a queste, secondo io stimo, riduconsi; cioè primo. Ch' elle si adattino alla grandezza di Vano, e del luogo, ove hanno a collocarsi, così che il grande al grande, il medio al medio, il piccolo al piccolo corrisponda; nè disparità alcuna v'appaja, o dissonanza di proporzione; cosa, che determinata esser vuole dalla perizia, e dal buon discernimento dell' Architetto."

²⁰¹ IDEM., *Istruzioni elementari*, p. 238: "Leggiadra poi sarà la Fabbrica, se in maniera tale fra di loro accordate, e proporzionate le di lei membra saranno, che l'occhio non solamente, ma il giudizio ancora de' riguardanti ne resti intieramente appagato."

²⁰² IDEM., *Istruzioni diverse*, p. 196: "Che per quanto la regolarità, ed il buon' ordine permettono, se ne accordino lineamenti con quelli del Vaso medesimo, nel quale hanno a prodursi."

a Gothic façade of Milan Cathedral).²⁰³ In addition, ornaments of stage sets for the *Quarant'ore* devotion ought to represent concepts, facts, or else stories taken from the Holy Scriptures,²⁰⁴ just as, in the same way, ornaments of buildings, especially capitals, ought to represent concepts by means of symbolic figures of animals and persons.²⁰⁵ Finally, stage sets for the *Quarant'ore* devotion ought to be disposed and adjusted in such a manner that the spectator, standing in the center or at a principal point of the church, is able to enjoy a view of its noblest aspect,²⁰⁶ just as, in the same way, church buildings ought to be advantageously disposed in a manner that the spectator, standing in the gallery or some other prominent place, can enjoy a view of every part of the church.²⁰⁷ The same holds true also for other types of decorations. For example, ornaments of fireworks machines and other such temporary decorations ought to display some historical or mythical event

²⁰³ IBID., p. 174: "Due diverse Facciate di Chiesa in stil Gottico dimostrano... Sonosi queste ideate per la celebre Catedrale di Milano, con ristesso d'uniformarsi nel Disegno di tale di lei parte allo stile, di cui è formato il corpo d'essa Chiesa..."

²⁰⁴ IBID., pp. 196-197: "Che gli Ornamenti stessi abbiano del mistico, rappresentando concetti, fatti, ovvero istorie, che allusivi siano ai Misterj, che in quel Sacrosanto Pane contengonsi; e siano tali concetti; ovvero fatti dedotti dalle Sacre Carte, come vero, ch' elle sono, e proprio seminario delle figure naturalmente allusive a sì fatti Misterj."

²⁰⁵ IDEM., *Istruzioni elementari*, p. 354: "Fra le cose vevoli a farci in parte conoscere lo studio, che gli Antichi impiegavano in bene adattare gli ornamenti alle Fabbriche, sono gli non pochi capitelli a noi rimasti, che per la qualità delle figure in essi espresse, atte ad ispiegar il concetto di chi gli produsse, chiamati volgarmente vengono Simbolici..."; IDEM., *Istruzioni diverse*, p. 145: "Suolsi talora nelle Fabbriche alcun poco ragguardevoli far uso d'Ornamenti allusivi al nome, al caratterre, alla dignità, allo stemma gentilizio, od a qualche prerogativa delle Persone, o pure al fine per cui s'erge l'Edificio; perlochè occorre aver l'Architetto a produrre nuova foggia di Capitelli..." See also TAVASSI LA GRECA, "'Decorazione'," p. 180.

²⁰⁶ VITTONI, *Istruzioni diverse*, p. 197: "Che il tutto in somma disposto, ed aggiustato sia in maniera, e con accordo tale, che standosi nel mezzo della Chiesa, o sia nel punto principale di essa, intiero goder si possa di tali Macchine, e nella più nobile loro apparenza l'aspetto."

²⁰⁷ IBID., pp. 184-185: "Elle è, come vedesi, al di dentro a due Ordine nella sua elevazione, con Tribune al di sopra delle Cappelle, e della Porta; alle quali possono le dette MM. portarsi per mezzo de' Passaggj, che formati vi si sono al di dietro de' Pilastri; e godere per ogni parte della vista della Chiesa."

related to the occasion for which they were was initially erected,²⁰⁸ just as, in the same way, ornaments of fountains and other permanent structures ought to depict some known story or fable.²⁰⁹

The Jesuits at Santi Martiri in Turin commissioned Vittone's stage sets for the Quarant'ore devotion. Jesuits too penned a number of books, owned by Vittone, in which references to the theater are made, including books by Paolo Segneri, Emanuele Tesauro, and Daniello Bartoli.²¹⁰ Segneri, who worked in Piedmont for a number of years, speaks of the theater as a metaphor for sacred oratory and panegyric.²¹¹ Segneri also speaks of a "theater of majesty" in one of his sermons: "You go there approaching the threshold of the supreme Divinity... over there see (aha see!), see in an abyss of splendor, in a theater of majesty, in a center of glory, see God."²¹² These words anticipate the instruction of another Jesuit, Andrea Pozzo, to draw all points to "that true Point, the Glory of GOD."²¹³ Indeed, Segneri wrote his

²⁰⁸ IBID., p. 165: "Vogliono tali sorta di Fabbriche, o Macchine, siccome già qui avanti si è, delle Fontane trattandosi, accennato, esser nella composizione loro maneggiate in guisa, che si scorga in quello, che alla vista di se presentano, un certo che, per cui animate compajano, e dimostranti sotto le specie de' proprj loro ornamenti un qualche concetto o favoloso, od istorico, che rapporto abbia, od allusione al fatto o sia caso, per cui prodotte rispettivamente vengono tali Macchine." See also FAGIOLO, "L'universo," p. 135.

²⁰⁹ VITTORE, *Istruzioni diverse*, p. 163: "Sul riflesso, che vogliono gli ornamenti inservienti a decorare tali di sorta di Fabbriche esser tuttora espressivi di cosa, che abbia in se in qualche modo del significativo, alludendo ad istoria, o favola alcuna..." See also FAGIOLO, "L'universo," p. 134.

²¹⁰ Vittone's ownership and citation of Jesuit writings is discussed on pp. 206-211 above.

²¹¹ See NOEHLES, "Scenografie," p. 154.

²¹² SEGNERI, *Il Quaresimale*, Sermon X, p. 686, cited in NOEHLES, "Scenografie," p. 154: "Voi vi andrete avvicinando frattanto al soglio della suprema Divinità... quivi vedrete (ahì vista!), vedrete in un abisso di splendori in un teatro di maestà, in un centro di gloria, vedrete Dio." See also M. COSTANZO, *Dallo Scaligero al Quadro* (Milan, 1961), p. 261, note 2.

²¹³ POZZO, *Perspectiva pictorum*, I; English ed. consulted, *Perspective in Architecture*, p. 12. Pozzo painted Segneri's portrait in 1694, proof that the two knew one another; see P. DELLA PERGOLA, "Quattro ritratti di Andrea Pozzo," *Studi trentini di scienze storiche* XIII:4 (1932), pp.

sermon on the occasion of Lent, the season of the liturgical calendar for which the sacred theater of the *Quarant'ore* devotion came to be closely associated.²¹⁴

Tesauro, who also worked in Piedmont and whose writings influenced artistic developments there and elsewhere, also speaks of the theater.²¹⁵ In *Il cannocchiale aristotelico* he explains that theatrical machines and *apparati* are metaphors representing true or fabulous places by means of appearances.²¹⁶ This idea is reflected in Vittone's maxim that the ornaments of *apparati* for the *Quarant'ore* devotion must act as metaphors representing concepts, facts, or else stories taken from the Holy Scriptures.²¹⁷ Tesauro speaks of sacred orators whose thoughts, commonly called predicable concepts, are received in the sacred theater with so much favor and admiration.²¹⁸ Tesauro also

260-265, here p. 263, note 5; and B. KERBER, *Andrea Pozzo* (Berlin-New York, 1971), p. 40. See also STRINATI, "Gli affreschi," p. 66, note 3 on p. 91, who detects in Pozzo's dome of Sant'Ignazio in Rome the same logic that guides Segneri's thought.

²¹⁴ It will be recalled that the Jesuits were largely responsible for transforming the *Quarant'ore* devotion into a Lenten theatrical spectacle as an alternative to the vanities of carnival. On the connection between Segneri's sermons on Lent and Pozzo's *apparati* for the *Quarant'ore* devotion at the Gesù in Rome, see MARTINELLI, "Teatri sacri," pp. 99, note 19 on p. 113; and CANAVESIO, "Presenze gesuitiche," pp. 284-285, note 17.

²¹⁵ On the influence of Tesauro's rhetoric and poetry on frescowork and architectural decoration in Piedmont, see G. CARITÀ, ed., *Il castello e le fortificazioni nella storia di Fossano* (Fossano, 1985), pp. 214-217, 221, 223-225, 226-228; and STRINATI, "Gli affreschi," p. 80. On the influence of Tesauro's writings on Baroque ephemeral and theatrical decoration in general, see FAGIOLO DELL'ARCO/CARANDINI, *L'Effimero barocco*, p. 57, note 4 on p. 467, pp. 58, 69.

²¹⁶ TESAURO, *Il cannocchiale*, p. 732: "Apparati & Machine Teatrali: son Metafore rappresentanti alcun luogo, ò Vero, ò Fabuloso; per mezzo di apparenze."

²¹⁷ VITTONI, *Istruzioni diverse*, pp. 196-197: "Che gli Ornamenti stessi abbiano del mistico, rappresentando concetti, fatti, ovvero istorie, che allusivi siano ai Misterj, che in quel Sacrosanto Pane contengonsi..."

²¹⁸ TESAURO, *Il cannocchiale*, p. 64: "Et quinci leggiermente intenderai qual cosa sian que' Pensieri de Sacri Oratori, che vulgarmente chiamar si sogliono, concetti predicabili: con tanto fauore & con tanta ammitation riceuuti dal sacro Teatro, che la Divina Parola pare hoggimai scipida & digiuna, s'ella non è consetta con tai dolcezza." See also NOEHLES, "Scenografie," p. 154.

interprets funeral decorations in terms of the theater, describing the *apparato* erected for the funeral of Maurizio di Savoia as a black theater.²¹⁹

Finally, Bartoli, the third Jesuit to be considered, speaks of the world as a theater of ever new and noble marvels, of theaters of ideas and imaginations, and of God and His theater of divine glory.²²⁰

Illumination and Illusion

In his addendum on theatrical instructions to *Istruzioni diverse*, Vittone treats not only the form of the modern theater but also its function. He explains that in ancient times the theater was a public building used for spectacles and scenic festivals, but that in modern times it is used for dramas, comedies, and similar performances for the amusement and delight of the spectators.²²¹ The stage setting itself is composed of scenes on canvas, that is to say wings, regularly placed with respect to one another, painted in one instance to represent temples and royal palaces, in another to represent houses, piazzas, gardens, parks, menageries, prisons, and in still another instance to represent mountains and caves, rivers, seas, the countryside, forests, and the like.²²² The theater then, as Vittone understood it, serves

²¹⁹ TESAURO, S.J., *Il Cilindro, Oratione panagirica* (Turin, 1657), p. 4. See also COSTANZO, *Dallo Scaligero*, p. 261, note 2.

²²⁰ D. BARTOLI, S.J., *L'uomo di lettere difeso ed emendato* (Rome, 1645), p. 326, 328; IDEM., *La ricreazione del savio* (Rome, 1659), pp. 550, 570; IDEM., *Geografia trasportata al morale* (Venice, 1664), pp. 597, 599, 602-603. See also COSTANZO, *Dallo Scaligero*, p. 261, note 2.

²²¹ VITTONI, *Istruzioni diverse*, p. 203: "Era il Teatro presso gli Antichi un edificio pubblico destinato per gli spettacoli, e per le feste sceniche; serve a' tempi nostri per rappresentarvi Dramma, Commedia, od altro consimile Componimento a spasso, e diletto di coloro, che v'intervengono."

primarily to amuse and delight spectators, in the same way that the church building, characterized by novelty, variety, and playfulness, is itself intended for the enjoyment and delight of churchgoers.²²³ But if the theater serves to amuse and delight spectators, then it ought also serve to instruct and enlighten them. In this the theater again corresponds to the church building which, in addition to delighting churchgoers, also teaches them and inspires them to piety. This didactic function of the theater, and especially the sacred theater, is spelled out in Vittone's requirement, discussed in detail above, that the stage set for the *Quarant'ore* devotion be equipped with ornaments depicting "concepts, facts, or else stories taken from the Holy Scriptures" that allude to the mysteries contained in the Eucharist.

If the openwork dome of Vittone's churches functions as sacred theater, then the protagonist of the sacred play to be performed there is light itself, refracting and reflecting off surfaces both concealed and manifest, enlivening the colors of fresco, and enriching the entire space with gradations of brightness and shade.²²⁴ According to Fagiolo, Vittone's conception of light is shaped by three cultural components that intersect one another: 1) a

²²² IBID., p. 203: "Do alla prima di tali parti il nome di Scenario per riguardo delle scene, di cui ella componesi. Sono le scene, come ognun da, telai regolarmente fra loro accordati, e disposti a dimostrare per mezzo della pittura, che vi si fa, que' luoghi, ove si fingono avvenuti i casi, che dagli Attori vi si rappresentano. Quindi è il vedesi in esse espressi ora Tempi, e Pallazi Reali, ora altre edificj, come sono case, piazze, giardini, parchi, serragli, e prigioni; ora monti e caverne, fiumi, mari, campagne, foreste e simile."

²²³ IBID., p. 185: "...e godere per ogni parte della vista della Chiesa."; IBID., p. 186: "...che si trovano in Chiesa, a spaziare per li vani, che esistono fra esse, e godere in tal modo coll' ajuto della luce..."; IBID., p. 189: "...continuando per tutta l'estensione della Chiesa, lascia all' occhio la liberà di potersi a suo piacere per essa distendere, e pienamente in tal modo de' varj di lei aspetti godere." See also CAVALLARI MURAT, "L'architettura sacra," p. 43.

²²⁴ PORTOGHESI, "Metodo e poesia," pp. 101-102: "Gia nel Vallinotto la luce è protagonista materializzandosi nei raggi dorati che scendevano dagli occhi a lucello della volta delle cappelle..."; BOTTO, "Architettura," in *Arte in Bra*, p. 98: "Una luce ... che assume il ruolo di protagonista assoluta della vicenda architettonica."

metaphysical-hermetic component conditioned by Neo-Platonism and heterodox occultism, 2) a mystical-dogmatic component conditioned by orthodox Catholicism, and 3) a secular-scientific component conditioned by Newtonian physics and tied to an aristocratic understanding of art as a transcendental activity.²²⁵

The metaphysical-hermetic component of Vittone's conception of light is evident above all in his statement that light is imprinted by God throughout the world and reflects His presence in individual creatures:

...You devote yourself as Sovereign Architect to the formation not only of one World, but of as many Worlds as there are creatures comprised in it, and in these same Worlds You gave us the character of light imprinted as the traces of your Art.²²⁶

The character of light imprinted in the "one World" is the same character of light imprinted in the "many Worlds."²²⁷ This is the correlation of the Macrocosm and the Microcosm that is a central tenet of Neo-Platonism.

The careful and mysterious use of light in Vittone's churches had its origin in the archaic horizon of Neoplatonic belief. Light was a traditional symbol of divinity, now made explicit through its newly discovered qualities and magical properties.²²⁸

²²⁵ FAGIOLO, "L'universo," p. 118.

²²⁶ VITTORE, *Istruzioni elementari*, Dedication, pp. IV-V: "...Voi, che non sdegnando d'applicarvi già qual Sovrano Architetto alla formazione, non dirò già solo d'un Mondo, ma di tanti Mondi, quante sono le creature, che in esso comprendonsi, a noi lasciate ne' medesimi a caratteri di luce impresa le traccie d'un Arte...."

²²⁷ FAGIOLO, "L'universo," p. 118, interprets Vittone's reference to "one World" and "so many Worlds" as homage to Leibniz and his concept of the monad; see also HENDRIX, *Architectural Forms*, pp. 96, 99, 100.

²²⁸ PÉREZ-GÓMEZ, *Architecture*, p. 111.

Light is the imprint of God stamped in the Macrocosm and the Microcosm alike, and thus it is stamped in the person of the architect himself who, endowed with a grand spirit, aspires to the highest level of glory, and who, in his expert knowledge of science and all the arts, emulates God.²²⁹

It should not indeed seem excessive to some that the architect be so adorned and endowed with science. Yet according to the opinion of not only Vitruvius, but of every person of sound judgment versed and expert in the architectonic faculties, the architect is not only to be endowed with this, but with a more necessary knowledge appropriate for a master of all the arts, which he surely is...²³⁰

The architect emulates God not only in his expert knowledge, but also in the act of creating, and the critical instrument by which the architect creates is, as Vittone pointedly tells us, the eye itself:

...it has pleased You to entrust to the human eye the means of creating that supreme and ever admirable harmony and beauty, that is in You (in so far as Man himself is capable)...²³¹

Here then is the metaphysical, even theological, basis upon which Vittone promotes the eye to its privileged position.

Fagiolo also identifies a hermetic if not heretical strain in Vittone's architectural thought that was tied to, and shaped by, his Neo-Platonism, and

²²⁹ FAGIOLO, "L'universo," pp. 118, 119.

²³⁰ VITTORE, *Istruzioni elementari*, Preface, p. III: "Nè già deve ad alcuno sembrare soverchio abbia l'Architetto ad essere di tante scienze adornato, e fornito: perciocchè secondo l'avviso non solo di Vitruvio, ma d'ogni Persona di retto giudizio, versata, ed esperta nelle Architetoniche facoltà, gli sono non solo queste, ma più altre ancora cognizioni necessarie, come ad un Capo, quale egli è, di tutte le Arti..." See also FAGIOLO, "L'universo," p. 118; and HENDRIX, *Architectural Forms*, p. 97, note 21 on p. 246.

²³¹ VITTORE, *Istruzioni elementari*, Dedication, pp. V-VI: "...che compiaciuto vi siate d'affidare i mezzi di fare all'occhio dell'Uomo di quella somma, e sempre mai ammirabile armonia, e bellezza, che è in Voi (per quanto è l'Uomo stesso capace)..."

that reflected the impact of alchemy, the Cabala, Freemasonry, and other occult sciences.²³² Identifying and pointing to Masonic references scattered throughout the pages of Vittone's treatises, Fagiolo argues that our architect was specifically affected by Masonic ideas.²³³ For example, Vittone refers to God as the "Sovereign Architect of the World,"²³⁴ just as, in various Masonic professions, God is referred to as the "Grand Architect of the Universe."²³⁵ Vittone also speaks of the "characters of light" impressed in man by God just as, again in Masonic references, the light of nature is understood to have been sculpted and placed in the human heart by God as an eternal lamp to illuminate His actions.²³⁶ Eugenio Battisti identifies still another possible Masonic reference in Vittone's dedication of *Istruzioni diverse* to the Madonna, whom Battisti, citing *Proverbs* (8:30-9), equates with Binah, a hermetic figure representing Wisdom.²³⁷

²³² FAGIOLO, "L'universo," pp. 120-124.

²³³ Fagiolo (IBID., p. 121) suggests that Vittone became familiar with the rites of Freemasonry while a student in Rome (1731-33) after the Masons had first gathered in that city in 1724, but before the first Lodge was opened there in 1735. Vittone's association with the Masons, Fagiolo argues, would have continued in Turin where the first Lodge was opened in 1738, the same year that Freemasonry was prohibited by a papal bull of excommunication, the first of many such bulls. Fagiolo admits that it is difficult to believe that Vittone was, or continued to be, actively associated with the Masons after 1738 in light of the excommunications promulgated against them. Vittone's Catholic conscience, which appears to have been genuine, would have precluded him from fully embracing the Masonic mysticism that formed the underpinning of the progressive ideas of the Enlightenment. Still, Fagiolo argues, Freemasonry is an indispensable factor for understanding the origin of some of Vittone's determinant positions, among which is the cult of light.

²³⁴ VITTORE, *Istruzioni elementari*, Dedication, pp. IV-V: "...qual Sovrano Architetto alla formazione, non dirò già solo d'un Mondo, ma di tanti Mondi..." See also FAGIOLO, "L'universo," p. 117.

²³⁵ IBID., p. 120, note 4.

²³⁶ IBID., pp. 120-121.

²³⁷ E. BATTISTI, "La rivalutazione del 'barocco' nei teorici del settecento," in Viale, ed., *Bernardo Vittone e la disputa*, II, pp. 173-214, here pp. 207-208. See also CANAVESIO, "Presenze gesuitiche," p. 278, note 60, p. 279, note 61.

It will be recalled from the discussion above that both of Vittone's published treatises are characterized in part by the hermetic and cabalistic strains of Jesuit thought. In *Istruzioni elementari* Vittone mentions the Jesuit, Juan Bautista Villalpando, who, in collaboration with another Jesuit, Jerónimo del Prado, penned *In Ezechielem Explanationes*, a book that, steeped in hermeticism, reconstructs the design of the Temple of Solomon.²³⁸ Also in *Istruzioni elementari* Vittone cites Claude-François Menestrier, a Jesuit who wrote on emblems and the Cabala,²³⁹ together with Menestrier's book on heraldry, *La nouvelle methode raisonnée du blason*, which, however, is not recorded in the inventory of Vittone's library, but which Vittone assuredly knew since, in the citation, he records both place and date of publication.²⁴⁰

In the addendum on musical harmony to *Istruzioni diverse*, written by Vittone's assistant and collaborator, Giovanni Battista Galletto, frequent mention is also made of the Jesuits, Daniello Bartoli and Athanasius Kircher, and their respective treatises on music, *Del suono de' tremori armonici* and *Musurgia universalis*.²⁴¹ Both Bartoli and Kircher combined hermeticism with

²³⁸ VITTONI, *Istruzioni elementari*, p. 330: "Villalpando vuole, che quest' Ordine tolga la sua origine dal Tempio di Salomone..."

²³⁹ IBID., p. 548: "Fra questi il Padre Menestrier di nazione Tedesco, che in quest' Arte ha fatto grandi osservazioni..."; p. 554: "...derivano secondo P. Menestrier dai colori degli abiti..."; p. 574: "...e specialmente dal Padre Menestrier grandi volumi..." See also CANAVESIO, "Presenze gesuitiche," p. 278, note 53.

²⁴⁰ VITTONI, *Istruzioni elementari*, p. 548: "...come rapportato trovasi nel Nuovo Metodo d'apprendere l'arte del Blasone, stampato in Amsterdam nell' anno 1695..."

²⁴¹ IDEM., *Istruzioni diverse*, p. 222: "...fattane racconta d'aver appreso il Padre Bartoli al cap. 7. del terzo de' suoi trattati del suono..."; p. 223: "...per cui venir possa l'etere sonoro agitato; ed a questo principio il Padre Kircherio [sic], siccome leggo nella di lui Musurgia al cap. 12. del lib. 1..."; p. 227: "...a cui testificare s'accordano con Aristotile (dice il P. Bartoli)..."; p. 234: "...di tal sorta di sperimenti alcuno ne rapporta il Padre Bartoli sovracitato al cap. 3. del 2 de' di lui Trattati del suono..."; p. 238: "...che giusta il rapporto fattone dal P. Bartoli al cap. 5. del Trattato 2..."; p. 242: Però scrisse il P. Bartoli nel secondo de' suoi Trattati del suono al Cap. 6. che un muro scabro, e solamente arricciato non rende il terzo della voce, che in lui fa la ripercussione

science, and it was this approach that Galletto also adopted. For just as Kircher's treatise is characterized by hermetic, numerological, and cabalistic references, so too the same occult references characterize Galletto's addendum on harmony.²⁴² Galletto outlines a theory of harmonic proportion in the field of music with respect to religion and the occult sciences, in particular numerology and the Cabala, discussing at length the musical and mystical significance of the numbers 2, 22, and 7.²⁴³

Fagiolo identifies, in addition, a number of illustrated plates in Vittone's treatises that manifest the influence of Masonic ideas. One of these is the frontispiece to *Istruzioni elementari* featuring an obelisk that, as Fagiolo

dell' Echo..."; p. 243: "Ed il già di sopra più volte citato P. Bartoli riferisce apprenderci Aristotile..."; p. 244: "...che rapportata trovo dal P. Bartoli anzidetto al cap. 6. del Trattato 2..."; p. 246: "...quale appunto esser leggo il rinomato Echo della celebre villa di Simonetta presso Milan, che va, e ritorna dall' una all' altra di due gran fronti di muro fra loro parallele, e distanti (a quel, che ne rapporta il Kircherio nella sua Musurgia lib. cap. 4. preclus. 2.) 33..."; p. 251: "...che al Cap. VII. del quarto de' suoi Trattati il P. Bartoli..."; p. 263: "...e ne sta in prova l'esperienza dal P. Bartoli riferita al cap. IV. del Trat. III..."; p. 264: "...che il Padre suddetto rapporta nel cap. stesso dicendo ... siccome infatti sembrarono al succennato P. Bartoli..." See OLIVERO, *Le opere*, p. 74; and CANAVESIO, "Presenze gesuitiche," p. 276, note 39.

²⁴² Both Galletto and Kircher define music in the same terms with respect to consonance and dissonance, and both refer to the same passage in Vitruvius describing harmonic vases (*armonici vasi*) with respect to the resonance of theatrical buildings, a topic tied to Vittone's academic experience under Antoine Derizet who in 1732 had authored the second class competition of the *Concorso Clementino* for a "teatro lapideo" containing the "vasi armonici." On Galletto's debt to Kircher, see IBID., pp. 276-277.

²⁴³ VITTONI, *Istruzioni diverse*, pp. 320-323. On the symbolism of the numbers 2, 22 and 7 in Vittone's treatise, see PÉREZ-GOMEZ, *Architecture*, pp. 111-112; and CANAVESIO, "Presenze gesuitiche," pp. 274-275, notes 29-30. In addition to having written the addendum on music in *Istruzioni diverse*, Galletto also wrote his own unpublished manuscript, "Clavis sacra profundiora Davidicæ domus penetralia recludens seu Codex vaticinus in quo præcipua sacræ, atque prophetici tradidere Scriptores, juxta sensum eorum intimum ordinatim exponuntur, studio, atque labore digesta Architecti Joannis Baptistæ Galleti Cariniani" (ca. 1770-93), presently conserved in the Archivio di Stato in Turin, and containing references to Plato and Hermes Trismegistus as well as to the Talmud and Nostradamus. Galletto's treatise, like his addendum on music appended to *Istruzioni diverse*, is firmly rooted in the cabalistic tradition. It utilizes Christian, Hebraic, Latin, and vernacular Italian texts (i.e., the Bible, the Talmud, Juvenal, Dante, and Ariosto) for the purpose of comparing it to its cabalistic source and drawing prophecies from it. See also POMMER, *Eighteenth-Century*, p. 133, note 88, who mistakenly spells the word "vaticinus" (meaning "prophetic") in the title of Galletto's manuscript as "Vaticanus," an error that has been corrected by CANAVESIO, "Presenze gesuitiche," p. 272, note 8.

interprets it, is a hermetic allegory of the Temple of Solomon.²⁴⁴ The obelisk is covered with Egyptian hieroglyphs that are themselves associated with hermetic and occult knowledge. Several other illustrations of obelisks carved with hieroglyphs, together with commentaries on hieroglyphs themselves, occur in Vittone's treatises (Figure 3.11).²⁴⁵ Fagiolo finds further evidence of Masonic ideas in one of Vittone's two projects for the façade of Milan Cathedral, illustrated in *Istruzioni diverse*, featuring a benediction loggia in the central pavilion of the portico, which Fagiolo interprets as homage to the lodges attached to medieval cathedrals.²⁴⁶ There is also the project for a Temple of Moses that Vittone submitted to the Accademia di San Luca in 1733, which Fagiolo takes as evidence of Vittone having absorbed hermetic ideas while still a student in Rome.²⁴⁷ Moses, according to Masonic speculation, is a figure who possessed a decidedly hermetic character. Marsilio Ficino (1433-99), the humanist and Neo-platonic philosopher, had identified him with Hermes Trismegistus himself, the Egyptian god of wisdom and reputed author of ancient hermetic books containing occult knowledge. Consequently, Moses came to be known within Masonic circles as the "grand architect" of the Tabernacle. In the Constitution of Free Masons (1723) Moses is described as the Master Mason General, expert in all the Egyptian sciences and architect of the Tabernacle whose design, it was believed, served as the model for the Temple of Solomon. Moses was believed to have designed the Tabernacle

²⁴⁴ VITTONI, *Istruzioni elementari*, pl. 1. See also FAGIOLO, "L'universo," p. 129, note 1, fig. 1.

²⁴⁵ VITTONI, *Istruzioni elementari*, pp. 283, 302, 443, 545; pls. 9, 59; IDEM., *Istruzioni diverse*, pl. 35. See also FAGIOLO, "L'universo," p. 129, note 3, figs. 6, 8-9.

²⁴⁶ VITTONI, *Istruzioni diverse*, p. 174, pl. 46; FAGIOLO, "L'universo," p. 124. See also NOEHLES, "I progetti," p. 872, fig. 589; and CARBONERI, "Il dibattito," p. 114, fig. 16.

²⁴⁷ FAGIOLO, "L'universo," pp. 121, 124.

according to prototypes that God had revealed to him on Mount Sinai, making special use of Geometry by means of which the stones and bricks of the Tabernacle were cut. Vittone himself wrote a panegyric to Geometry in *Istruzioni elementari*, taking note of its esoteric character and Egyptian origins.²⁴⁸ In addition, Vittone, or rather Galletto, cites Hermes Trismegistus by name in *Istruzioni diverse*.²⁴⁹

Fagiolo identifies Masonic symbols throughout Vittone's designs. These include the radiant delta, the serpent entwined around a terrestrial globe and its related figure, the ourobourus (an encircled snake eating its own tail symbolizing Eternity), the Salomonic column, and the six-pointed Star of David (or Seal of Solomon). The radiant delta appears at the summit of the domes of Vittone's churches of San Luigi Gonzaga at Corteranzo and the Assunta at Grignasco.²⁵⁰ It also appears at the Visitazione at Vallinotto, on the summit of the original lantern vault which has since been obscured, and on several church furnishings, including a tabernacle and two confessionals (Figure 4.46).²⁵¹ In addition, the radiant delta appears in a number of Vittone's

²⁴⁸ VITTORE, *Istruzioni elementari*, pp. 9-10: "Eppure quelli spaventosi diluvj, che inutili, e perniciosi piuttosto da principio giudicati farebbero, la somma Benificenza destinò alla fertilità incomparabile dell' Egitto, e dalla confusione, che per tal inondazione a quelle campagne ne deriva, fuori ne trasse la più bella, e nobile scienza, e la più vantaggiosa dottrina, che l'umano intendimento eserciti, cioè la Geometria: ed ecco come da effetto, che pare a caso prodotto, la Provvidenza uscir ne faccia un lume non tanto all' Egitto tutto, quanto all' Universo intiero di singolar vantaggio, e splendore. Le cognizioni Geometriche adunque, base, e fondamento di tutte le Matematiche scienze, ebbero la loro origine dall' Egitto." See also FAGIOLO, "L'universo," p. 131.

²⁴⁹ VITTORE, *Istruzioni diverse*, p. 219: "Disse già Platone, e prima di lui il celebre Egizio Re Trismegisto, Filosofi entrambi al sommo eccellenti, altro non essere la Musica (la notizia, val a dire, del consono, e del dissono) che una scienza concernente l'ordine, secondo il quale ha la natura le cose tutte disposte..."

²⁵⁰ FAGIOLO, "L'universo," p. 122, note 1. See the illustrations in BENEDETTO/BENEDETTO, *La luce ha mani*, pp. 29, 64.

designs illustrated in *Istruzioni diverse*, including one for a railing, one for a ciborium, and one for a baptismal font.²⁵² The motif appears again in one of Vittone's side altar projects for San Francesco d'Assisi in Turin (1767) as delineated in both a preliminary drawing conserved in the Museo Civico in Turin (Figure 3.60) and a plate from *Istruzioni diverse*.²⁵³ Finally, the radiant delta appears in the window, as originally designed but not executed, above the main altar of Vittone's parish church at Pecetto (Figure 1.2).²⁵⁴

The serpent entwined around a globe appears in several of Vittone's projects illustrated in *Istruzioni diverse*, including one for an altar and another for Turin Cathedral, in which the motif is set atop each of the two campanili.²⁵⁵ Its related figure, the ourobourus, also appears in *Istruzioni diverse*, in the catafalque that Vittone copied after a design by Carlo Fontana (Figure 3.6).²⁵⁶

The Salomonic column appears also in several of Vittone's projects published in *Istruzioni diverse*, including in his first, unexecuted *apparato* for the *Quarant'ore* devotion (Figure 3.33)²⁵⁷ and his fountain in a large urban

²⁵¹ VITTONI, *Istruzioni diverse*, p. 186: "...e fino alla sommità del Cupolino, ove espressa vedesi la Santissima Triade." On the furnishings, see ARDUINO/GENTILE, "Itinerari per una lettura," pp. 97-99, figs. 164, 167.

²⁵² VITTONI, *Istruzioni diverse*, pls. 28, 97, 100 (left figure) respectively. See also FAGIOLO, "L'universo," p. 122, note 1, fig. 13.

²⁵³ Turin, Museo Civico. VITTONI, *Istruzioni diverse*, pl. 90 (center figure). See also OLIVERO, *Le opere*, p. 73; IDEM., *La chiesa di S. Francesco*, pl. 21; CARBONERI, "Architettura," in *Mostra del Barocco*, I, p. 62, no. 166, pl. 157-a; PORTOGHESI, *Bernardo Vittone*, p. 156, pl. 281; and CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 36, no. 92, fig. 149.

²⁵⁴ IBID., fig. 6; FAGIOLO, "L'universo," p. 122, note 1.

²⁵⁵ VITTONI, *Istruzioni diverse*, pls. 87, 199. See also FAGIOLO, "L'universo," p. 122, note 2, p. 129, note 1, fig. 5.

²⁵⁶ VITTONI, *Istruzioni diverse*, pl. 103. See also WITTKOWER, "Vittone's Drawings," p. 168, fig. 3; and FAGIOLO, "L'universo," p. 122, note 2.

²⁵⁷ VITTONI, *Istruzioni diverse*, pl. 98.

square (Figure 3.48). Vittone also treats the Salomonic order in *Istruzioni elementari*,²⁵⁸ where he reminds the reader of the order's legendary origins in the Temple of Solomon:

The best examples that we have of this type of column are those of the Vatican Basilica and their invention is very ancient. It is said of the ones that are over the large niches, under the dome, that they were previously in the Temple of Solomon.²⁵⁹

Vittone explains that the Salomonic column is a delicate column and must not be used to bear a heavy load since it has more beauty than strength, for which reason it is most suitably used in tabernacles and similar ornaments, provided that the spiral wavering is aligned and coordinated with that of the corresponding column.²⁶⁰

The final Masonic motif to be found in Vittone's work, the Star of David, occurs, as we have seen, in the interlaced ribbed domes of his triangular-hexagonal churches (as traced out in plan). The triangular-hexagonal church plan itself suggests a possible connection to Freemasonry since Masonic Lodges were frequently designed on just such a plan, the triangular form alluding to the Masonic symbol of the bricklayer's trowel.²⁶¹

²⁵⁸ IDEM., *Istruzioni elementari*, pp. 362-364, pl. 47, fig. 3. See CANAVESIO, "Presenze gesuitiche," p. 281, note 79.

²⁵⁹ VITTORE, *Istruzioni elementari*, p. 363: "Gli migliori esempi, che abbiamo di questa sorta di colonne, sono nella Basilica Vaticano, e la loro invenzione è assai antica. Quelle, che ora sono sopra li quattro nicchioni sotto la Cupola di essa, si dice, che fossero già al Tempio di Salomone."

²⁶⁰ IBID., pp. 363-364: "Questa specie di colonne non conviene, che agli Ordini più delicati, e per l'ordinario si adatta all' Ordine Composito, nè mai s'impiega, ove debbasi rappresentare sodezza; poichè esse dimostrano più ricchezza, che solidità; mercechè alle volte appena vi rimane a piombo la metà del vivo loro; onde come inabili a reggere non furono mai dagli Antichi pregiate. Qualora però vorremo di queste servirci in Tabernacoli, od altre simili cose di ornamento, dovremo disporle in modo, che i loro ondeggianti si corrispondano fra loro con bell' accordo, ed effetto."

Fagiolo underscores the hermetic character of all these motifs, and yet each and every one of them is informed as well by orthodox Catholic conventions. The radiant delta, for example, with its pronounced triangular arrangement, is a clear and obvious symbol of the Holy Trinity. Vittone himself specifically identifies it as such in his description of the dome at Vallinotto, where the motif was originally displayed.²⁶² Vittone also employed the motif in a specifically and unmistakable Trinitarian context in one of his altar designs in *Istruzioni diverse* (Figure 3.50),²⁶³ where it appears as the triangular nimbus above the head of God the Father pictured with the Scourged Christ and the Dove of the Holy Spirit in a specific and deliberate grouping of the Three Persons of the Trinity. As for the ourobourus, it too had a conventional religious association, and appeared in previous works of Francesco Borromini, Elpidio Benedetti, and Carlo Fontana among others (Figure 3.3).²⁶⁴ Likewise, the Salomonic column was characterized by an

²⁶¹ An equilateral triangular plan, for example, was projected by an unidentified English architect for a Lodge for French Free Masons as illustrated on a plate by François Cuvillies the Younger in *Ecole de l'architecture bavaroise* (Paris and Munich, ca. 1735-ca. 1777); see H. ARNDT and K. ARNDT, "Ein 'Château Triangulaire' des Maurizio Pedetti," in E. Guldán, ed., *Beiträge zur Kunstgeschichte, Eine Festgabe für Heinz Rudolf Roseman zum 9 Oktober 1960* (Munich, 1969), pp. 249-278, here p. 268, note 41 on p. 277, fig. 12; and HAGER, "The Accademia," p. 132, note 33 on p. 138, fig. 7-g.

²⁶² VITTONI, *Istruzioni diverse*, p. 186: "...e fino alla sommità del Cupolino, ove espressa vedesi la Santissima Triade." The appearance of the radiant delta on a tabernacle and the two confessionals of the Visitazione has also been interpreted as a Trinitarian symbol; see ARDUINO/GENTILE, "Itinerari per una lettura," I, p. 98, figs. 164, 166: "...e ai due confessionali che riprendono nella cimassa il simbolismo trinitario, dominante nell'impianto della cappella, e calzano e perfezione con l'andamento dell'involucro murario appositamente a shondo delle strutture lignee."

²⁶³ VITTONI, *Istruzioni diverse*, pl. 94 (left figure). See also CAVALLARI MURAT, "Aggiornamento," p. 572, fig. 25.

²⁶⁴ Borromini depicted the ourobourus in combination with an all-seeing eye in the ceiling decoration in a room of his Palazzo Falconieri in Rome; see "Illustrazioni," in *Studi sul Borromini*, 2 Vols. (Rome, 1967), II, p. 341, fig. 40. Benedetti depicted the ourobourus in his funeral decorations for Anne of Austria (1666); see FAGIOLO DELL'ARCO/CARANDINI, *L'Effimero barocco*, p. 18, fig. 15, p. 236. And Fontana depicted the ourobourus, as noted, in his design for a catafalque for King Pedro II of Portugal entwined in olive branches that frame a

orthodox and conventional religious association, and in any case was a common feature in Italian Baroque architecture, particularly in the work of Bernini and Guarini.²⁶⁵ So too the Star of David is a motif that is commonly found in Guarini's architecture.

Whatever hermetic and Masonic references there may have been in his work, Vittone emptied them of their heretical content by appealing to Sacred Scripture and by identifying light with the Christian God.²⁶⁶ For example, with regard to numerology, Vittone carefully exorcises every hint of heresy by citing such Biblical passages as, "But you have disposed all things according to measure and number and weight," *Wisdom* (11:20), and "Before all things else Wisdom was created [...] It is the Lord; He created her, has seen her and taken note of her," *Sirach* (1:4, 7), tying them to the science of numbers in which God, acting in an entirely singular manner, deposits, and hides His Mysteries.²⁶⁷ Vittone tells us that musical Harmony is a science in which God deposits conspicuous signs and symbols of His most sublime and excellent mysteries.²⁶⁸ Vittone provides additional justification for his numerology by

portrait of the king, the same catafalque design that Vittone copied and published as his own design in *Istruzioni diverse*, see BRAHAM, *Funeral Decorations*, p. 23, pl. 23.

²⁶⁵ On Guarini's use of the Salomonic order, see RAMÍREZ, "Guarino Guarini," pp. 175-185.

²⁶⁶ FAGIOLO, "L'universo," pp. 121-122.

²⁶⁷ VITTONI, *Istruzioni elementari*, p. 90: "...parole sono del Savio, che alla verità stessa in questo tenore il confessa: *Omnia in mensura, & numero, & pondere disposuisti* (*Sapient*: 11.); ed in un' altro luogo: *Prior omnium creata est sapientia &c. Deus creavit illam in Spiritu Sancto, & vidit, & dinumeravit, & mensus est* (*Eccl*. 1.). Questa in somma fra le umane scienze è quella, in cui volle Iddio in un modo tutto singolare, più che in ogn' altra depositare, e nascondere i suoi Arcani." See also FAGIOLO, "L'universo," p. 132; CANAVESIO, "Presenze gesuitiche," p. 280; and HENDRIX, *Architectural Forms*, p. 98, note 29 on p. 246.

²⁶⁸ VITTONI, *Istruzioni diverse*, p. 322: "In vista però di tali, e tante, e tutte mistiche corrispondenze punto io non dubito esser l'Armonia una scienza, a cui abbia Iddio in seno depositati i simboli, ed i segni maggiormente cospicui de' suoi più eccelsi, e più ammirabili arcani." See also PÉREZ-GÓMEZ, *Architecture*, p. 112; and CANAVESIO, "Presenze gesuitiche," p. 275.

pointing out that the Bible itself functions as a Sacred Map in which Mysteries are formed and concealed by numbers expressive of Divinity which the human spirit, through the light of Wisdom, is able to investigate and know for the purpose of finding happiness.²⁶⁹ Vittone also invokes the philosophy of Pythagorus by which everything is understood to derive from, and to consist of, number.²⁷⁰ In short, Vittone sublimates whatever hermetic ideas he may have entertained under the cloak of orthodoxy, an orthodoxy which, in any case, he vigorously upheld and defended in his writings, explicitly proclaiming in one passage, for example, that the errors of heresy are exposed and corrected by Catholic truth.²⁷¹

Vittone equates light with heavenly wisdom, an equation that, while it may have hermetic overtones, essentially ensues from the mystical-dogmatic component of his conception of light:

...with light, which is Wisdom, in so far as the human spirit is able to investigate and know Divinity itself, the summit is happiness, to which our intellect is able to aim.²⁷²

²⁶⁹ VITTONI, *Istruzioni elementari*, p. 90: "Ce lo affermano le Sagre Carte, che ad ogni passo Misterj formano di numeri, e ben fanno agli Uomini oculati conoscere darsi numeri fra gli altri proprj, ed espressivi della Divinità, col lume de' quale può il Sapiente, per quanto è capace l'umano spirito, della Divinità stesso le grandezze investigare, e conoscere, che la somma è delle felicità, a cui l'intelletto nostro prender possa la mira." See also FAGIOLO, "L'universo," p. 132; and CANAVESIO, "Presenze gesuitiche," p. 280, note 71.

²⁷⁰ VITTONI, *Istruzioni elementari*, p. 90: "No, No, meraviglia non sia, che abbia fra i Filosofi un Pitagora detto, le cose tutte derivare da' numeri: *Ex numeris, & Mathematicorum initiis proficisci omni* (2. accid.)."

²⁷¹ IDEM., *Istruzioni diverse*, p. 171: "...che dall' error dell' ereticale pravità passo fanno alla Cattolico verità..."

²⁷² IDEM., *Istruzioni elementari*, p. 90: "...col lume de' quali può il Sapiente, per quanto è capace l'umano spirito, della Divinità stessa grandezze investigare, e conoscere, che la somma è delle felicità, a cui l'intelletto nostro prender possa la mira."

It is a reference to light that has its counterpart in the tradition of mystical Christianity. St. Augustine, for example, identifies immaterial light with Holy Wisdom.²⁷³ The fifth century monk, John Cassianus, speaks of a Prayer of Fire as the work of the Holy Spirit, the highest grade of illumination through which God manifests His love as fire and light for the intellect.²⁷⁴ And St. Bernard of Clairvaux, Vittone's patron saint and namesake, writes of the mystical wedding between God and the Soul in which all passive resistance of the Soul is destroyed by the Word that illuminates, enflames, and transforms the Soul with the power, splendor, and velocity of light.²⁷⁵ This enflamed spirit, this light, eliminates and disintegrates all material opposition. Vittone's knowledge of St. Bernard's theology is confirmed by his ownership of both the writings and the hagiography of the saint,²⁷⁶ and by his explicit mention of the saint in *Istruzioni elementari*.²⁷⁷

In Vittone's church of San Bernardino at Chieri we are presented with an architectural concretization of St. Bernard's vision of the mystical wedding.²⁷⁸ Light, entering the church from above, breaks through the "passive resistance" of the vaults and pendentives. It acts as a corrosive fluid

²⁷³ ST. AUGUSTINE, *City of God*, XI:10, p. 355: "...the immaterial soul is illumined with the immaterial light of the simple wisdom of God, as the material air is irradiated with material light, and that, as the air, when deprived of this light, grows dark, (for material darkness is nothing else than air wanting light), so the soul, deprived of the light of wisdom, grows dark."

²⁷⁴ FAGIOLO, "L'universo," p. 137.

²⁷⁵ IBID., p. 137.

²⁷⁶ On the listing of St. Bernard's writings and hagiography in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 248, nos. 452, 473.

²⁷⁷ VITTONI, *Istruzioni elementari*, p. 598: "...e dall' autorità di S. Bernardo..."

²⁷⁸ FAGIOLO, "L'universo," p. 137. The church of San Bernardino is dedicated to St. Bernardino of Siena (1380-1444), not to be confused with St. Bernard of Clairvaux (1090-1153).

that, in a material sense that gives expression to the spiritual, erodes and dissolves all dull resistance, disintegrates and eliminates all corporeal opposition, leaving numerous and ample perforations in the masonry shells.²⁷⁹ Light entering Vittone's church, in the words of Fagiolo, "carves out architecture, models it by way of subtraction, perforates it, dematerializes it ... renders it unreal or surreal, impalpable, infinite."²⁸⁰ In short, the scenographic extroversion of Vittonian light coincides with, and gives material expression to, the ascetic introversion of Christian mysticism.²⁸¹ Fagiolo continues:

Neither do they lack, as is evident above all in Santa Chiara at Bra, effects of reflection, diffusion, filtration of the diurnal clarity in a hierarchy of grades of light corresponding to the principles of ascetic illumination.²⁸²

The spiritual character of light is exemplified in several of Vittone's minor projects, one for a ciborium and another for an altar, in which a luminous theophany appears to proceed from the consecrated Host.²⁸³ It is exemplified also in one of his designs for an *apparato* for the *Quarant'ore* devotion in which the divine rays emanate from the monogram for the Name of Jesus, IHS, confronting and competing with, in a duel of lights, the physical

²⁷⁹ VITTONI, *Istruzioni elementari*, p. 244: "...proprietà essere naturale de' raggi, come egli è di tutti i fluidi..." See also FAGIOLO, "L'universo," p. 149.

²⁸⁰ IBID., p. 149: "La luce scava l'architettura, la modella 'per via di levare,' la trafora, la smaterializza [...] la rende irreale o surreale, impalpabile, infinita."

²⁸¹ IBID., p. 137.

²⁸² IBID., p. 145: "Né mancano, come è evidente soprattutto nella Santa Chiara di Bra, effetti di riflessione, diffusione, filtrazione della chiarezza diurna, in una gerarchia di gradi di luce corrispondente ai principii della illuminazione ascetica. Simbolo, emblema, spazio e luce coincidono dunque nello stesso modello, in superiore unità conoscitiva."

²⁸³ VITTONI, *Istruzioni diverse*, pls. 96-98; FAGIOLO, "L'universo," p. 136, notes 1-2.

rays that emanate from the candelabras (Figure 3.34).²⁸⁴ Vittone also represents Christ as the sun in several projects — once in a tabernacle in which the luminous rays suggest a “chrismon,” the most ancient symbol of the sun,²⁸⁵ and again, more explicitly, in a tabernacle sheltering an effigy of Christ from whose nimbus luminous rays emanate in an iconography tied not only to Helios but, it would seem, to an alchemical figuration of the sun.²⁸⁶

The mystical-dogmatic component of Vittone’s conception of light is also demonstrated to good effect in his designs for churches dedicated to St. Clare of Assisi. These churches are several in number: Santa Chiara at Bra, Santa Chiara in Turin, Santa Chiara at Vercelli, and the unexecuted project for Santa Chiara at Alessandria.²⁸⁷ Vittone must have recognized certain affinities among his Clarissan church designs since he gathered his descriptions of them into a single grouping in *Istruzioni diverse*.²⁸⁸ It is particularly telling that in

²⁸⁴ VITTONI, *Istruzioni diverse*, pl. 99; FAGIOLO, “L’universo,” p. 136, note 3.

²⁸⁵ VITTONI, *Istruzioni diverse*, pl. 97. A similar “chrismon” appears in Vittone’s design for a pulpit; *IBID.*, pl. 101. See FAGIOLO, “L’universo,” p. 136, note 6.

²⁸⁶ VITTONI, *Istruzioni diverse*, pl. 95; FAGIOLO, “L’universo,” p. 136, note 5, fig. 33.

²⁸⁷ See POMMER, *Eighteenth-Century*, p. 109, note 22 on p. 124; FAGIOLO, “L’universo,” p. 140, note 2; and TAVASSI LA GRECA, *Bernardo Antonio Vittone*, pp. 8, 18-19. The Clarissan nuns also commissioned Vittone to enlarge the pre-existing convent of Santa Chiara at Fossano (1761) for which, in addition, he designed the main altar (1761-62), a project that he describes and illustrates in *Istruzioni diverse*, p. 195, pl. 93. Later, when the convent was suppressed and the church partially demolished, Vittone’s altar was transferred (1811) to the Cathedral at Fossano where it was readapted for use in the Chapel of the Beatified Oddino Barotto. See BRAYDA, “Opere inedite,” p. 87, fig. 65; PORTOGHESI, *Bernardo Vittone*, pp. 173, 232; CARBONERI/VIALE, eds., *Bernardo Vittone*, p. 37, no. 93, fig. 152; POMMER, *Eighteenth-Century*, p. 120, note 22 on p. 124; G. ROMANO, ed., *La cattedrale di Fossano* (Fossano, 1993), pp. 140, 141, note 74, pp. 198-199, 232, 238; and CANAVESIO, “Vittone a Fossano,” pp. 129-137, 141-146, pls. XLIX – LI. On Vittone at Fossano, see also C. MORRA, “Ingegneri ed architetti operosi in Fossano nel settecento,” *Bollettino della Società per gli Studi Storici, Archeologici ed Artistici della Provincia di Cuneo* 54 (1966), pp. 21-30.

²⁸⁸ VITTONI, *Istruzioni diverse*, pp. 183-185, pls. 69-73. See also FAGIOLO, “L’universo,” p. 140, note 2.

three of these descriptions — those of the churches at Bra, Turin, and Alessandria — Vittone pointedly emphasizes the role of light.²⁸⁹

A clue to Vittone's ideas regarding his Clarissan churches, and the didactic role that light plays in them, is found on the pages of *The Life of Saint Clare*, a hagiography of the saint written soon after her death in 1253, and a book which Vittone owned.²⁹⁰ In addition there is the papal bull of her canonization, *Clara clavis praeclara*, issued by Pope Alexander IV in 1255, and the saint's own writings, including her Testament written as a guide to her Poor Sisters and her letters to Blessed Agnes of Prague. In the hagiography we learn the origins of the saint's name, that at the time when Clare's mother, Ortolana, was with child and her delivery was at hand, she heard a voice saying to her: "Fear not, woman, for thou shalt in safety bring forth a light which will illumine the world more clearly." And so when the newborn infant was reborn in holy Baptism she "was named Clare in the hope that the brightness of the promised light might in some way be verified after the good pleasure of the Divine Will."²⁹¹ Allusions to Clare's clarity, luster, brightness, radiance, and luminosity abound throughout the papal bull. She is accorded

²⁸⁹ VITTONI, *Istruzioni diverse*, p. 183: "...allorquando si procedette alla formazione della Chiesa [i.e., Santa Chiara in Turin], convenne collocare il Coro tra due Gallerie, per l'apertura delle quali deve necessariamente esso prendere il lume."; *IBID.*, p. 184: "Cosa trovai pure in questo caso opportuna il fare aperte le Vele, per dare col mezzo di tali aperture al Vaso della Chiesa [i.e., Santa Chiara at Alessandria] quel compimento di luce, che altronde procacciarvi restava affatto impossibile."; *IBID.*, p. 185: "...alla vista presentansi di chi sta in Chiesa [i.e., Santa Chiara at Bra] le Pitture esistenti nella Volta superiore, coll' ajuto però del lume, che loro prestano gli occhj a lucello, che vi sono all' intorno, e delle aperture, che esistono nelle Volte delle suddette Tribune."

²⁹⁰ *The Life of Saint Clare* (Philadelphia, 1910), with quotations here taken mainly from I.C. BRADY, O.F.M., *The Legend and Writings of Saint Clare of Assisi* (St. Bonaventure, N.Y., 1953). On the book's listing in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 250, no. 721.

²⁹¹ *Life of Saint Clare*, p. 7. See also FAGIOLO, "L'universo," p. 142, note 3.

titles of clarity in its various degrees; she is at once clear (*clara*), clearer (*clarior*), clearer still (*praeclarior*), and brilliant (*clarissima*).²⁹² Clare is described also in the bull as a candlestick whose flame gives light to the lamps of others:

She was the lofty candlestick of holiness that burned brightly in the tabernacle of the Lord, to whose great splendor many hastened and do now hasten to light their lamps from her light.²⁹³

Clare herself speaks of light in her writings. In her Testament, for example, written as a guide to her Poor Sisters, Clare equates divine grace with light:

After the most high celestial Father had deigned to enlighten my heart by His mercy and grace ... I voluntarily promised [St. Francis] obedience ... according to the light of His grace which the Lord had given us by the holy life and teaching of His servant.²⁹⁴

According to Fagiolo, the close correlation between Clare's name and the program of her life, that is to say between the word and the figure, can be defined in heraldic terms as a perfect imprint (*impresa perfeta*).²⁹⁵ The art of heraldry is itself one that Vittone treats exhaustively in *Istruzioni elementari*, devoting over 60 pages to the subject.²⁹⁶ Vittone explains that an emblem:

²⁹² BRADY, *Legend*, p. 105. See also FAGIOLO, "L'universo," p. 142.

²⁹³ BRADY, *Legend*, p. 107.

²⁹⁴ IBID., p. 83.

²⁹⁵ FAGIOLO, "L'universo," p. 142.

²⁹⁶ VITTONI, *Istruzioni elementari*, pp. 545-608. Vittone's passion for heraldry was inherited from Juvarra who penned his own treatise on the subject, *Raccolta di Targhe fatte da Professori primarj in Roma, diseguate ed intagliate dal cav. D. Filippo Juvarra Architetto* (Rome, 1711). Indeed, Vittone ends his discussion of heraldry with a passage entitled, "D'alcune Regole geometriche dell' Abate Filippo Juvara [sic] per disegnare in bella proporzione le Targhe per ogni grado di Persone," concerning Juvarra's geometric rules governing the proportioning of coats of arms.

...is composed of spirit and body; that is to say of words and figures among them, conveniently able to express, or to imagine the feeling of him who bears them; representing in the figures the body, and in the words the spirit, of what he imagines.²⁹⁷

Vittone also incorporated emblems in one of his Clarissan churches, Santa Chiara in Turin, by which he illustrates the theme of *claritas* closely associated with St. Clare herself.²⁹⁸ There are eight emblems in all, one prominently displayed on each side of the octagonal church. Each emblem is composed of a motto and a bas-relief of a figure related in meaning to the words of the motto, with all eight emblems referring either directly or indirectly to the theme of illumination.

The first emblem, positioned above the main altar, bears the motto, "AT MAGIS CLARA COELO," having the meaning of "but brighter than heaven."²⁹⁹ It is accompanied by a bas-relief of the moon, a symbol of Clare,³⁰⁰ for just as the moon is the reflection of the sun's light, so Clare, the very image of God, is the reflection of divine light.³⁰¹ It is an image derived from the papal bull of canonization:

²⁹⁷ IBID., pp. 588-589: "La perfetta è quella, è composta d'anima, e di corpo; vale a dire di parole, e di figure tra loro convenienti, atte ad esprimere, o divisare il sentimento di colui che le porta; rappresentandosi nelle figure il corpo, e nelle parole l'anima d'esse divise." See also FAGIOLO, "L'universo," p. 142.

²⁹⁸ See IBID., pp. 141-145. The church of Santa Chiara in Turin formed part of the convent within which two of Vittone's half-sisters, Giovanna Maria Theresa and Rosa Caterina, were cloistered; see POMMER, *Eighteenth-Century*, p. 259, §2.

²⁹⁹ FAGIOLO, "L'universo," p. 141, fig. 25.

³⁰⁰ A similar emblem with a bas-relief depicting St. Clare as the moon reflecting the sun's light to earth is found in another one of Vittone's Clarissan churches, Santa Chiara at Vercelli.

³⁰¹ Vittone himself explains the symbolism of the sun and moon, noting that the sun is a symbol of divinity, magnificence, and other divine qualities, while the moon is a dependent and lesser power (*Istruzioni elementari*, p. 578): "Il Sole è simbolo della Divinità, magnificenza, e delle altre qualità Divine; come la Luna lo è d'una potenza dipendente, e subalterna."

Clare, illustrious by the brilliancy of her merits, rejoices in the brightness of great glory in heaven, and in the luster of extraordinary miracles on earth. Here below shine forth her austerity and deep piety, and on high there radiates the greatness of her eternal reward. [...] In heaven the fullness of divine light shines upon this Clare...³⁰²

The role of Clare as an intermediary agent reflecting light is repeated in the second emblem whose motto, "LUX LUNAE SICUT SOLIS," is taken from *Isaiah* (30:26): "The light of the moon will be equal to the light of the sun."³⁰³ In the bas-relief Clare is depicted as a mirror positioned between the sun and the earth. She is shown receiving a luminous ray from the sun above and reflecting it down to a basin of water below. And indeed the light she reflects is as radiant as sunlight itself, an image that again is taken from the papal bull:

O wondrous blessed clarity of Clare! The more it is studied in detail, the more brilliant it is found in every feature. She shed light, we repeat, while yet in the world; while in religion she shone above others; in her father's house she was like a little ray, but in the cloister like the brilliance of lightening. In life she shone to a few; after death she shines on the whole world; on earth she was a clear light; now in heaven she is a brilliant sun.³⁰⁴

In the bas-relief the solar image appears thrice — on the face of the sun, on the face of the mirror, and on the face of the water. The theme, as Fagiolo observes, is thus one of fire and water.³⁰⁵ According to Fagiolo, the sun

³⁰² BRADY, *Legend*, p. 105. See also FAGIOLO, "L'universo," pp. 141-142.

³⁰³ IBID., p. 142, fig. 27.

³⁰⁴ BRADY, *Legend*, p. 105. See also FAGIOLO, "L'universo," p. 143.

³⁰⁵ IBID., pp. 137-138, note 1 on p. 138. Fagiolo identifies the theme of fire and water as one that also characterizes other Vittonian projects, including the fireworks machine to celebrate the coronation of a monarch in which the sun is shown juxtaposed with the Po River (VITTONI, *Istruzioni diverse*, pl. 35), the fountain in an urban square in which the Salomonic

symbolizes God, the water symbolizes humanity, and the mirror symbolizes Clare in her role as intermediary between heaven and earth, as receiver and transmitter of divine light.³⁰⁶ Clare collects the light emanating from God and transmits it to dull humanity.³⁰⁷ Consequently, she is understood as that feminine element that, like the Virgin Mary, is at the same time a luminous lunar medium and the “purest mirror of divinity.”³⁰⁸ Clare thus serves as a mediatrix through whom, again like the Virgin Mary, the Divine Will establishes the victory of light over darkness.

The association of Clare with a mirror was first made by the saint herself. In her Testament she exhorts her Poor Sisters to become shining lights and bright mirrors for the benefit of those in the world.

For the Lord has placed us as an example and mirror not only for other men, but also for our Sisters whom God has called to our way of life, that they in turn should be a mirror and an example to those living in the world.³⁰⁹

Clare also writes of mirrors in several of her letters to Blessed Agnes of Prague. In her third letter she admonishes her charge to “place thy mind

column, conceived as a sundial, is combined with a pool of flowing water (IBID., pl. 36), and a baptismal font in which light is shown radiating from above (IBID., pl. 100).

³⁰⁶ FAGIOLO, “L’universo,” p. 142.

³⁰⁷ According to Fagiolo (IBID., p. 145), the four roundels represented on the dome of Santa Chiara in Turin are meant to represent luminous mirrors.

³⁰⁸ IBID., pp. 142-143, note 1 on p. 143.

³⁰⁹ BRADY, *Legend*, p. 83. See also FAGIOLO, “L’universo,” p. 143. The importance of the mirror as a religious metaphor is described by a book commonly used for the instruction of nuns, G.P. BARCO, *Specchio religioso per le monache* (Milan, 1609), a copy of which Vittone owned; see PORTOGHESI, *Bernardo Vittone*, p. 250, no. 716.

before the mirror of eternity..."³¹⁰ And in her fourth letter Clare speaks of Christ as a mirror:

For He is the brightness of eternal glory (*Hebrews* 1:3), the splendor of eternal light, the mirror without blemish (*Wisdom* 7:26). Look into that mirror daily, [...] In that mirror are reflected blessed poverty, holy humility, and ineffable charity, [...] Behold, I say, the start of this mirror: the poverty of Him Who was placed in a manger and wrapped in swaddling clothes. [...] In the middle of the mirror consider the humility, the blessed poverty, the untold labors and burdens which He sustained for the redemption of the human race. In the end of that mirror contemplate the unspeakable charity which led him to suffer on the tree of the Cross and to die thereon [...] Whence did that Mirror, as He hung upon the wood of the Cross, bid the passers-by to consider all this...³¹¹

Elsewhere, in both the papal bull of canonization and the hagiography, it is Clare herself who is described as a mirror. In the papal bull we read:

O Clare, endowed with so many titles of clarity! Lustrous (*clara*) even before thy conversion, more lustrous (*clarior*) in thy conversion, more lustrous still (*praeclarior*) in thy cloistral life, and now that thy mortal course is ended most radiant (*clarissima*) in thy splendor. In Clare, a clear mirror is given to the entire world.³¹²

And:

Her very life was for others a school of instruction and doctrine. In this book of life the others learned the rule of life; in this mirror of life the others beheld the path of their own life.³¹³

³¹⁰ BRADY, *Legend*, p. 94.

³¹¹ IBID., pp. 96-97.

³¹² IBID., p. 105. See also FAGIOLO, "L'universo," p. 142.

³¹³ BRADY, *Legend*, p. 107.

And in the hagiography we read that the good father, St. Francis, “hastened to lead Clare out of the dark world, lest the mirror of her unspotted soul be longer tarnished by the dust of the earth...”³¹⁴

The third emblem bears the motto, “SPECIES EXHILERAT,” having the meaning of “the sight gives cheer.”³¹⁵ The bas-relief portrays a rainbow set upon clouds, an image inspired by *Genesis* (9:13) recounting the story of Noah in which God says, “I set my bow in the clouds to serve as a sign of the covenant between me and the earth.” Clare is that cheerful sight, the rainbow, signifying the triumph of light.³¹⁶

The fourth emblem shows another scene from the story of Noah, with the bas-relief depicting a dove clutching an olive branch as she makes her return to the ark. The motto, “AMICA MEA COLUMBA MEA,” is taken from *Song of Songs* (5:2) in which the bridegroom speaks to his bride: “Open to me, my sister, my beloved, my dove, my perfect one!”³¹⁷ Thus the emblem, like the previous one, alludes to Clare as God’s messenger of peace, but it also alludes, as the meaning of the motto makes plain, to Clare as the sister and bride of Christ. The olive branch depicted in the bas-relief may also refer to Clare’s spiritual enlightenment that occurred on Palm Sunday 1212 when, to mark the epiphany, she received an olive branch from St. Francis.³¹⁸

³¹⁴ IBID., p. 22.

³¹⁵ FAGIOLO, “L’universo,” p. 144, fig. 28.

³¹⁶ The emblem may refer as well to Clare as Iris, the mythological deity of the rainbow, in her role as divine messenger; see IBID., p. 144.

³¹⁷ IBID., p. 144, fig. 30.

³¹⁸ IBID., p. 144.

The theme of illumination is only slightly and indirectly addressed in the fifth emblem. Its motto, "PATENTQUE CUNCTIS OSTIA," having the meaning of "the doors are open to all," is taken perhaps from *Isaiah* (26:2): "Open up the gates to let in a nation that is just, one that keeps faith," or perhaps from *Song of Songs* (8:9): "If she is a door, we will reinforce it with a cedar plank."³¹⁹ The accompanying bas-relief is of a door, richly adorned, an entirely apposite image, not only because the emblem is positioned above the main entrance to the church, but because to Clare is assigned the attribute, traditionally associated with the Virgin Mary, of the entrance to heaven.

The sixth emblem bears the motto, "QUASI AQUILA VOLABIT," taken from *Jeremiah* (48:40): "For thus says the Lord: 'Behold, like an eagle he soars.'"³²⁰ The eagle is depicted in the accompanying bas-relief soaring upward into the luminous rays of the sun, an evident reference to Clare's mystical illumination in the culminating moment of her ascent to God.

The final two emblems allude to Clare's Christian virtues, which shine indirectly as special types of illumination. One of them, the seventh emblem, refers to Clare's virginity. Its motto, "SPECIOSUS EX HORRIDO," has the meaning of "the beautiful out of the bristly," and is accompanied by a bas-relief of a lily among thorns inspired by *Song of Songs* (2:2) in which the bridegroom says of his bride: "As a lily among thorns, so is my beloved among women." The other one, the eighth and final emblem, refers to Clare's charity and self-denial. Its motto, "QUOTIES VOLUI CONGREGARE FILIOS," is taken from *Luke* (13:34) in which Jesus pleads with Jerusalem:

³¹⁹ IBID., p. 144.

³²⁰ IBID., p. 144, fig. 26.

“How often have I wanted to gather your children as a mother bird collects her young under her wings.” It is accompanied by a bas-relief of a pelican feeding its young with its own blood, a Christological symbol that is here applied to St. Clare herself.³²¹

The theme of the victory of light over darkness receives a telling expression in another one of Vittone’s Clarissan churches, Santa Chiara at Bra. In his description of the church, Vittone emphasizes the role of light in illuminating the dome:

The double vault is provided with openings in its lower part, which allow the observer to admire the frescoes painted on the upper vault, thanks to the good lighting existing both in the vault and in the galleries.³²²

Light enters the dome of the church through concealed windows and bathes the outer vault in a luminous glow. Vittone writes that he designed the dome in this manner for the purpose of allowing the observer to admire the frescoes painted on the outer vault. And indeed, gazing upwards into the dome the spectator sees brightly illumined paintings of St. Clare and St. Francis rising in a graded ascent toward God, the church interior serving thereby as a type of Jacob’s Ladder whereby the saints are illuminated with more and more light as they draw closer to the celestial realm. Pommer observes:

³²¹ IBID., p. 145, fig. 29. See also STARGARD, “Repression,” p. 213, note 42 on p. 223, who cites this emblem as proof of the close connection between Vittone’s royal houses of charity and his churches for the Clarissan nuns.

³²² VITONE, *Istruzioni diverse*, pp. 184-185: “La Volta è doppia, e per quattro grandi aperture, che formate sonosi ne’ quattro principali campi dell’ inferiore alla vista presentansi di chi sta in Chiesa le Pitture esistenti nella Volta superiore, coll’ ajuto però del lume, che loro prestano gli occhj a lucello, che vi sono all’ intorno, e delle aperture, che esistono nelle Volte delle suddette Tribune.”

There the frescoes show Saint Clare and Saint Francis ascending towards the dove of the Holy Spirit in the lantern, and so elucidate the special meaning of the vault: just as it is the intermediary between the spectator's realm and that beyond, and the only imperfectly comprehensible structure, so the saints are depicted in the mystical instant of transition."³²³

Once again St. Clare is presented as a type of radiant mirror reflecting the divine light by means of which the illumined Soul ascends to God.³²⁴

Light is both concealed and diffused in the multi-shelled, perforated dome of Santa Chiara at Bra, and this concealment and diffusion of physical light gives architectural expression to the concealment and diffusion of St. Clare's spiritual light. In the hagiography we read, "Clare remained enclosed, yet she began to enlighten the whole world and become a shining example in praise of all."³²⁵ And in the papal bull we read:

On earth this light indeed was kept within cloistral walls, yet shed abroad its shining rays; it was confined within a convent cell, yet spread itself through the wide world. It was kept within, yet it streamed forth without. For though Clare was hidden, her life was known to all; though Clare was silent, her fame cried out; though Clare was enclosed in her cell, she was preached to men in all the cities.³²⁶

Clare's light is so brilliant and fervent that it cannot remain hidden but must diffuse itself throughout the house of God:

³²³ POMMER, *Eighteenth-Century*, p. 113.

³²⁴ The figure of St. Francis depicted on the dome is likewise presented as a luminous agent, bearing a scroll that reads: "SACERDOS HAC DEBET PURITATE NITERE," meaning "The priest ought to shine in purity." See BOTTO, "Pittura," in *Arte in Bra*, p. 222 (bottom figure).

³²⁵ BRADY, *Legend*, p. 26.

³²⁶ IBID., pp. 105-106.

Little wonder indeed that a light so burning and shining could not be hidden but would break forth and illuminate the house of the Lord; that a vessel of such fragrance could not be kept closed but would diffuse itself and fill the mansion of the Lord with its sweet odor. Indeed, while Clare in the seclusion of her solitude broke the alabaster vase of her body, the whole building of the Church was filled with the fragrance of her sanctity.³²⁷

The hidden light of Clare is also diffused by means of her miracles:

Now because a great and shining Light cannot remain hidden, but must diffuse the rays of its brightness, so in the lifetime of Clare the power of her holiness shone forth in many different miracles.³²⁸

And:

Resplendent therefore with merits while she lived, now, caught up in the depths of eternal brightness, Clare still wonderfully shines to the ends of the earth by the light of her miracles.³²⁹

In a like manner, the physical light that enters the dome of Santa Chiara at Bra cannot remain hidden, but must diffuse itself. The dome simultaneously conceals and diffuses physical light just as St. Clare, cloistered in her cell, simultaneously concealed and diffused spiritual light. The same also holds true of Vittone's design for another Clarissan church, the unexecuted project for Santa Chiara at Alessandria, in which light was projected to have entered

³²⁷ IBID., p. 106.

³²⁸ IBID., p. 108. One of these miracles was the curing of a blind man, which occurred soon after Clare's death. According to the hagiography the blind man approached the saint's sepulcher and was restored to sight (IBID., p. 56): "And he arose at once, to find that his blindness had left him and all dimness of sight was gone. Clearly, through Clare, he saw the clearness of light, and gave shining praise to God..."

³²⁹ IBID., p. 53.

the dome through concealed windows and diffused itself throughout the church.

The mystical-dogmatic component of Vittone's conception of light is also demonstrated to good effect in the church of San Bernardino at Chieri. There, on both the exterior and interior of the church, Vittone prominently displays an emblem closely associated with light and illumination. It is the IHS monogram, initials standing for the Name of Jesus, to which the titular saint of the church, St. Bernardino of Siena (1380-1444), had been especially and deeply devoted.³³⁰ The IHS monogram frequently appears as a radiant light in Italian Baroque painting, and in particular in *quadratura* paintings associated with Jesuit commissions such as Giovanni Battista Gaulli's *The Triumph of the Name of Jesus* in the Gesù. It also appears, again as a radiant light, in several of Vittone's own designs for altars, tabernacles, and thrones, including his high altar for the Sanctuary of Sant'Ignazio near Lanzo commissioned by the Jesuits.³³¹ In Vittone's church at Chieri the IHS monogram is prominently displayed twice, once on the exterior and once in the interior. On the exterior it appears on the tympanum of the pediment of the main façade surrounded by a sculptural relief of clouds and luminous rays. In the interior it appears at the crown of the lantern above the dome, again with a relief of clouds and rays emanating from the ring of the oculus.³³²

³³⁰ The IHS is an abbreviation representing the first three letters of the Greek majuscule of Jesus' name: the Greek capitals Iota, Eta and Sigma to form ΙΗΣ. The Latin tradition used the capital Greek Eta and because it looked like an H it took the form of the Latin H, hence the IHS. This led to incorrect expansions of the Latin to Ihesus. There were other misguided attempts to expand the three letters IHS, e.g., to Iesus Hominum Salvator (Jesus Savior of Men) and In Hoc Signo [vinces] (In this sign you will conquer). I am grateful to Thomas Heffernan, Professor of English at The University of Tennessee, Knoxville, for having provided this explanation to me.

³³¹ VITTONI, *Istruzioni diverse*, p. 194, pl. 93.

The prominent display of the monogram appears to have been a deliberate and calculated gesture since St. Bernardino of Siena, a mendicant preacher renowned for his sermons, was especially devoted to the Holy Name of Jesus.³³³ He even designed an emblem or coat of arms in which he set the IHS monogram in gold against a blue ground and encircled it, as though it were the sun, by twelve large golden rays and numerous smaller ones, the whole surrounded by an outer circle bearing the motto: "So that at Jesus' name every knee must bend, in the heavens, on the earth, and under the earth," *Philippians* (2:10). St. Bernardino had the emblem depicted on a wooden tablet, which he would hold up before the congregation after his sermons as he gave his blessing.³³⁴ He explained the symbolism of the emblem in his sermon entitled "On the Glorious Name of Jesus." The monogram represents the sun that rises in the east, the blue color of the ground represents faith without which there cannot be glory, and the twelve large rays emanating from the monogram represent the twelve articles of faith, spread throughout the world by the twelve Apostles, according to which it is written that "the rising sun illuminates all things, so the glory of the Lord fills all His works," *Sirach* (42:16).³³⁵ St. Bernardino conceived the Name of Jesus in terms of a solar cult, proclaiming that: "This name, glorious above all others, must be set in the most glorious place in the world, namely in the

³³² FAGIOLO, "L'universo," figs. 31-32.

³³³ I. ORIGO, *The World of San Bernardino* (New York, 1962), pp. 117-130.

³³⁴ Pietro Paolo Operti, the artist who painted the frescoes on the dome of Santa Chiara at Bra, also painted the *Triumph of St. Bernardino* on the vault of the church of San Bernardino at Saluzzo (1755) in which he depicted the saint held aloft by angels and carried to heaven with the IHS monogram circumscribed by a radiant sun above the saint's head.

³³⁵ V. FACCHINETTI, O.F.M., *S. Bernardino da Siena, mistico sole del secolo XV* (Milan, 1933), p. 354. See also ORIGO, *The World*, p. 118, note 6 on p. 278; and FAGIOLO, "L'universo," p. 146, note 1.

sun.”³³⁶ He explicitly likened the Name of Jesus to the material sun, for just as the material sun with its vigor, splendor, and heat vivifies, fertilizes, and conserves everything that is in the world, so the Name of Jesus gives and maintains the life of Grace to all humans, the beginners and the proficient and the perfect alike.³³⁷

Vittone would appear to have had this very sermon in mind when he designed San Bernardino at Chieri.³³⁸ Not only did he locate the IHS monogram in highly prominent positions on both the exterior and interior of the church, but he also conceived the entire church itself as an architectural metaphor for spiritual illumination. According to Fagiolo, the IHS monogram is not only a visualization of the Christ-Sun but also a philosophic model of space.³³⁹ The light that radiates from the lantern of the dome triumphantly advances to lacerate and punch through every material resistance, to overturn boundaries, and flood through the pendentives and shells of the dome and semi-domes, materializing itself in stucco rays.³⁴⁰

The secular-scientific component of Vittone’s conception of light, the third such cultural component as defined by Fagiolo, is articulated in Vittone’s treatment of sight and perspective in *Istruzioni elementari*, discussed in detail above and summarized again here. Vittone explains that there are two essential extrinsic accidents dependent upon sight, namely the temperament

³³⁶ ORIGO, *The World*, p. 118.

³³⁷ FACCHINETTI, *S. Bernardino*, p. 354. See also FAGIOLO, “L’universo,” p. 146, note 1.

³³⁸ There is no record of St. Bernardino’s sermons in the inventory of Vittone’s library.

³³⁹ IBID., p. 146.

³⁴⁰ IBID., p. 146.

of light and the state of the eye, and this because perspectival effects vary both as light changes and as the eye moves. Vittone appeals to the authority of modern physicists, mathematicians, and philosophers, and advises the young architect to study what they have to say about the temperament of light in order to acquire a firm and perfect knowledge of architectonic means, not only with regard to theoretical aspects but to practical ones as well.

Vittone was himself familiar with the principles and methods of modern science, mentioning in his treatises the Royal Academy of Sciences in Paris and a number of mathematicians and astronomers affiliated with it, namely Jean Picard (1620-82), Jacques Ozanam (1640-1717), Pierre Bouguer (1698-1758), Jacques Cassini (1677-1756), César-Francois Cassini de Thury (1714-84), and Nicolas Louis de Lacaille (1713-62).³⁴¹ In addition, Vittone owned a copy each of Ozanam's *Recreations mathematiques et physiques* (1694) and *Nouveaux elemens d'algebra* (1702).³⁴² He also consulted Ozanam's *La*

³⁴¹ VITTONI, *Istruzioni elementari*, p. 488: "...nel corso di Matematica del Signor Ozanam..."; IDEM., *Istruzioni diverse*, p. 84: "...osservazioni modernamente fatte da' Matematici della Regia Accademia delle Scienze di Parigi..."; p. 86: "...il rapporto d'Ozanam nella sua Geografia [...] ora citato d'Ozanam..."; p. 87: "...e fra' Moderni dalli Signori Picard, Cassini, de Thuri, de la Caille, ed altre celebri Matematici della Regia Accademia suddetta Parigi..."; p. 88: "...in cui (come ben notò M. Bouguer nel suo Trattato della figura della Terra) in trovarebbero..."; p. 89: "...siccome ben pure accennò il prefato M. Bouguer..."; p. 92: "...state prese da virtuosi e rispettabili Soggetti della fioritissima Regia Accademia delle Scienze di Parigi..."; 95: "...che ne fa Ozanam nella sua Geografia [...] M. Cassini nelle Memorie dell' Accademia anzidetta [...] Il prefato M. Cassini nelle Memorie anzidette..."; p. 95, note 1: "...che cuì con Ozanam diciamo ... asseriscono le Memorie della Regia Accademia suddetta..."; p. 96: "...compute fattone da M. Picard sulle Misure [...] già misurati da M. Picard [...] Il sovramenzionato M. Cassini soggiunge nelle Memorie suddette..."; p. 97: "M. Bouguer nel suo Trattato [...] Lo stesso M. Bouguer finalmente in detto suo Trattato..."; p. 98: "...componenti la media di M. Picard [...] ritrovate dallo Scrittore delle Memorie suddette della Regia Accademia [...] comunemente fanno i Matematici colla Regia Accademia..." See also FAGIOLO, "L'universo," p. 150, note 2.

³⁴² J. OZANAM, *Recreations mathematiques et physiques, qui contiennent plusieurs problèmes d'arithmetique, de geometrie, d'optique, de gnomonique, de cosmographie, de mecanique, de pyrotechnie, & de physique*, 2 vols. (Paris, 1694); IDEM., *Nouveaux elemens d'algebra, ou, Principe generaux pour résoudre toutes sortes de problèmes de mathématique* (Amsterdam, 1702). On the listing of Ozanam's two treatises in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 249, nos. 601, 602.

geographie et cosmographie (1711),³⁴³ Picard's *Mesure de la terre* (1671),³⁴⁴ Cassini's *Suites des Memoires de l'Académie Royale des Sciences* (1720),³⁴⁵ and Bouguer's *La figure de la terre* (1749)³⁴⁶ for his chapter on the geographic mile in *Istruzioni diverse*, citing all four books in his treatise.³⁴⁷ None of the four, however, are recorded in the inventory of his library. Vittone also owned two of Galileo's scientific tracts, one on mathematics and another on the cosmic system.³⁴⁸ Finally, Vittone knew of Isaac Newton's scientific thought through his reading of Francesco Algarotti's *Newtonianismo per le dame* (1739), a copy of which he also owned.³⁴⁹ Still, Vittone's understanding of Newton was tempered by his Neo-Platonism. For example, Vittone appeals to Newton's optical theory, which explains mathematically the separation of white light

³⁴³ J. OZANAM, *La geographie et cosmographie: qui traité de la sphere, des corps celestes, des differens systemes du monde, du globe, & de ses usages* (Paris, 1711).

³⁴⁴ J. PICARD, *Mesure de la terre* (Paris, 1671).

³⁴⁵ J. CASSINI, *Suites des Memoires de l'Académie Royale des Sciences, année MDCCXVIII* (Paris, 1720).

³⁴⁶ P. BOUGUER, *La figure de la terre, déterminée par les observations de Messieurs Bouguer & de la Condamine, de l'Académie royale des sciences, envoyés par ordre du roy Pérou, pour observer aux environs de l'équateur* (Paris, 1749).

³⁴⁷ VITTONI, *Istruzioni diverse*, p. 86: "...d'Ozanam nella sua Geografia..."; p. 88: "...M. Bouguer nel suo Trattato della figura della Terra..."; p. 95: "...Ozanam nella sua Geografia [...] M. Cassini nelle Memorie dell' Accademia anzidetta [...] Il prefato M. Cassini nelle Memorie anzidette..."; p. 95, note 1: "...asseriscono le Memorie della Regia Accademia suddetta..."; p. 96: "...da M. Picard sulle Misure [...] M. Cassini soggiunge nelle Memorie suddette..."; p. 97: "M. Bouguer nel suo Trattato [...] Lo stesso M. Bouguer finalmente in detto suo Trattato..."; p. 98: "...ritrovate dallo Scrittore delle Memorie suddette della Regia Accademi..."

³⁴⁸ On the listing of Galileo's two tracts in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 250, nos. 692, 696.

³⁴⁹ F. ALGAROTTI, *Newtonianismo per le dame, ovvero, Dialoghi sopra la luce i colori, e l'attrazione* (Naples, 1739). On the listing of Algarotti's book in the inventory of Vittone's library, see PORTOGHESI, *Bernardo Vittone*, p. 250, no. 701. On Vittone's reading of Algarotti, see *IBID.*, p. 20; FAGIOLO, "L'universo," p. 152; and OECHSLIN, *Bildungsgut*, p. 116, note 32 on p. 177.

into the seven colors of the rainbow, as confirmation of his Neo-Platonic theory of musical proportion.³⁵⁰

And has not the illustrious mathematician of recent times, Newton, with a completely shrewd and acute eye, discovered and made known to the world the seven types of elementary rays given by the sun? Has he not demonstrated the reflections, refractions and inflections of rays with the immutable order of numbers, with alternate and well regulated vicissitudes, and at intervals of space with divided musical grades?³⁵¹

Vittone thus turned to Newtonian science (in which proportion is understood to have a relative and immanent value, and number to have a purely technical and quantitative one) to support and advance a traditional theory (in which proportion is understood to have an absolute and transcendental value, and number to have a symbolic and qualitative one).³⁵² Vittone never fully appreciated nor understood “the importance of empirical, quantitative knowledge.”³⁵³ In the end, Vittone’s religious sensibility and his disposition toward Platonic cosmology and natural philosophy prevailed, and he infused both geometry and light with an absolute and transcendent value.³⁵⁴

³⁵⁰ FAGIOLO, “L’universo,” pp. 131-132, 152-154; PÉREZ-GOMEZ, *Architecture*, pp. 109-112; CANAVESIO, “Presenze gesuitiche,” p. 279.

³⁵¹ VITTORE, *Istruzioni elementari*, p. 89: “E non ha l’insigne Matematico degli ultimi tempi Neutone con occhio tutto sagacità, e perspicacia scoperto, e fatto osservare al Mondo sette sorta darsi di raggi elementarj nel Sole? Non ha egli dimostrato farsi d’essi raggi le riflessioni, refrazioni, ed inflessioni con ordine immutabile di numeri, con alterne, e ben regolate vicissitudini, e ad intervalli di spazio con musicale grado divisi?” See also FAGIOLO, “L’universo,” pp. 131-132; and HENDRIX, *Architectural Forms*, p. 98, note 28 on p. 246.

³⁵² PÉREZ-GOMEZ, *Architecture*, p. 112.

³⁵³ IBID., p. 109.

³⁵⁴ IBID., pp. 111-112.

... Vittone uses Newton's discoveries in support of the universal application of the law of numbers, and he is deeply convinced that a knowledge of musical theory is essential for an understanding of proportion in architecture. [...] It is idle to speculate on the fact that for Vittone, perhaps the most creative architect Italy had at that period, the great Renaissance tradition was still a living force.³⁵⁵

The living force of the Renaissance tradition is also manifest in the ontological and epistemological assumptions that informed Vittone's architectural thought. Newtonian science posits a cosmos that is measurable and quantifiable and that it is eminently knowable by means of empirical and mathematical operations. Vittone also posits a cosmos subject to mathematical law, and one that is knowable through the epistemological methodologies of empiricism and rationalism. But even as Vittone placed great store in the empirical faculty, he did not entirely trust the senses, particularly the sense of sight, as an infallible means for acquiring knowledge. Vittone had less than absolute faith in the eye's capacity to make truth known even if, on the other hand, he promoted the eye to a privileged position, identifying it as the critical instrument by which the architect emulates God in the act of creating harmony and beauty.³⁵⁶

Vittone tells us that the eye is fallible, that it can be deceived — so that what is true often appears to the eye as false, and the well-proportioned body does not always appear as such,³⁵⁷ hence the need for optical corrections to

³⁵⁵ WITTKOWER, *Architectural Principles*, p. 149.

³⁵⁶ VITTONI, *Istruzioni elementari*, Dedication, p. V: "...che compiaciuto vi siate d'affidare i mezzi di fare all' occhio dell' Uomo di quella somma, e sempre mai ammirabile armonia, e bellezza, che è in Voi (per quanto è l'Uomo stesso capace)..."

³⁵⁷ IBID., p. 396: "...onde, perchè il vero ci pare falso, e i copri ben proporzionati tal non appariscono..."

compensate for the false appearance given by the true,³⁵⁸ and hence too the need for illusion by which the appearance if not the substance of truth is saved by means of falsification. Illusion reveals truth even as it deceives the eye. It is needed not only to correct the false appearances given by the true, but also to charm and delight the eye. Vittone explains, by way of example, that the entasis of a column corresponds to the beauty and natural diminution of a great tree, and that the pyramidal tapering of its trunk renders a pleasing sight to the eye.³⁵⁹ Thus the entasis of a column is employed as much to delight the eye as to correct the optical deception generated by the perfect geometry of its cylindrical form. In the same way, and for the same purpose, Vittone adapted optical and illusionistic devices to his churches, equipping the arcades of the Assunta at Grignasco, for example, with a perspectival gradation, a solution that he deemed to be successful and pleasing to all who saw it.³⁶⁰

Vittone's openwork churches are made, by means of illusion, to seem more expansive than they are. It is the same type of illusion to be found in the Baroque stage. And indeed, the scenographic devices that serve to optically enlarge the Baroque stage — forced perspective, aerial perspective, layered arrangement of wings, hidden light sources and backlighting, and gradation

³⁵⁸ IBID., p. 396: "...cosa rendesi assolutamente necessaria il cangiare giusta le circostanze de' case le proporzioni degli oggetti, aumentandone le grandezze, sicchè ad apparire eglino vengano all' occhio, quali ei gli desidera."

³⁵⁹ IBID., p. 390: "...stante le bella dolce, e naturale diminuzione, che loro ne avviene corrispondentemente a quella d'un grand' albero, che per la naturale sua piramidale decrescenza rende di se stesso molto all' occhio la vista aggradevole..."

³⁶⁰ IDEM., *Istruzioni diverse*, p. 178: "Degna è quì a mio parere di ristesso la scambievole inclinazione de' lati delle Cappelle, e la tendenza, che concordemente i medesimi hanno ad un rispettivo lor punto esistente al di fuori di esse; motivo, per cui credei dovere in un colle Arcate l'Ordine pure disporre in degradazione prospettica; cosa, che riuscita mi è assai felicemente, nè senza appagamento nel suo aspetto delle Persone intelligenti, che la videro, seconda mi fu da esse accettato."

of illumination from dark foreground to bright background — are the same devices that Vittone employed in his designs for openwork churches.

In making the church appear more expansive by means of scenographic devices, Vittone succeeded in communicating the idea of infinity, with the openwork dome becoming in fact a metaphor for the infinite. Wittkower sees the idea of infinity expressed in Santa Chiara at Bra:

...by devising two vaults, one above the other, Vittone was able to create a symbol of the infinity of the heavens where saints and angels dwell: this is the verifiable concept that made him choose this particular form.³⁶¹

Hendrix sees the idea expressed in San Gaetano at Nice:

The variability and separation of cupolas and vaulted spaces is intended to impart the impression of the infinity of universal intelligence and the celestial realm, in ascension through the hierarchy of knowledge.³⁶²

And Portoghesi sees it expressed in San Bernardino at Chieri:

Upon entering the church and directing his gaze on high, the observer will be attracted to the ruptures of the envelope that punctuate the covering, like disseminated springs in a meadow, moments in which the concept of the infinite becomes communicable through the artifice of the metaphor. As the dizziness facing the precipice awakens the idea of infinite depth, and of infinite fall, so these wells of light evoke the sense of infinite ascent: of the existence of an object that is beyond any thinkable distance.³⁶³

³⁶¹ WITTKOWER, "Vittone's Domes," p. 214.

³⁶² HENDRIX, *Architectural Forms*, p.100.

³⁶³ PORTOGHESI, *Bernardo Vittone*, pp. 105-106: "Entrando in chiesa e rivolgendo lo sguardo in alto, l'osservatore sarà attratto dalle smagliature dell'involucro che punteggiano la copertura, come sorgenti disseminate in un prato, momenti in cui il concetto di infinito diventa comunicabile attraverso l'artificio della metafora. Come la vertigine di fronte al precipizio desta l'idea della infinita profondità e dell'infinito cadere, così questi pozzi di luce evocano il

In addition, Portoghesi writes that Vittone achieved a dialectical unity in his domes between limited space and infinite view.³⁶⁴ In a similar vein, Norberg-Schulz writes of the “infinitely distant” and “infinitely extended” space of Vittone’s openwork churches.³⁶⁵ The reference to infinity is suggested by Vittone himself who, in his own description of the Visitazione at Vallinotto, equates the superimposed shells of the dome with the celestial hierarchies.³⁶⁶ In short, Vittone’s dome gives a concrete representation of heaven, making the infinite tangible by means of the finite, and the eternal tangible by means of the temporal.³⁶⁷ In this, Vittone’s endeavor typifies the efforts commonly adopted by Baroque painters, scenographers, and architects.

To see God, to represent in the finite form of the artifice the celestial infinity, for all the Baroque period assumes the character of fiction, of the trick of the eyes, of the *trompe l’oeil*, that is the means more adapted to appeal to the imagination and to surpass the confines between the terrestrial world and the eternity of paradise. And the chosen method was illusionistic perspective.³⁶⁸

senso di un infinito ascendere: della esistenza di un obiettivo che è al di là di ogni pensabile lontananza.”

³⁶⁴ IDEM., “Metodo e poesia,” p. 101: “...per realizzare dialetticamente l’unità tra costruzione e figurazione, tra spazio determinato e infinito prospettico, soprattutto nella luce, *nella bramata luce* come egli steso la chiama, senza intenzioni retoriche, raccontandole vicende della cupola di S. Antonio a Torino.

³⁶⁵ NORBERG-SCHULZ, “Centrality and Extension,” p. 104; IDEM., *Late Baroque*, p. 167.

³⁶⁶ VITTONI, *Istruzioni diverse*, p. 186: “...la varietà delle Gerarchie, che gradatamente crescendo vi si rappresentano in esse Volte, e fino alla sommità del Cupolino, ove espressa vedesi la Santissima Triade.”

³⁶⁷ The three, stacked shells in Vittone’s dome at Vallinotto may be understood to correspond to the three grades of angelic hierarchy described by the Pseudo-Dionysius in his *Celestial Hierarchies*. See also GIUDICI/MEMOLI, *La architettura*, pp. 288-289, who draws comparisons between the dome at Vallinotto and El Greco’s “The Assumption of the Virgin.”

³⁶⁸ NOEHLES, “Scenografie,” p. 154: “Vedere Iddio, rappresentare nella forma finita dell’artificio l’infinito celeste, per tutto il periodo barocco assume il carattere della finzione, dell’inganno degli occhi, del *trompe l’oil*, cioè il mezzo più adatto per appellare

Vittone's conception of the openwork dome as a sacred theater — an apparatus that evokes an image of infinite, eternal, and invisible Majesty by means of a finite, temporal, and visible construct, and one that illuminates and instructs the imagination by means of illusion and falsification — suggests a blurring of the distinction between oppositions, between the eternal and the temporary, the revealed and the occult, the true and the false. In architectural terms it suggests, as well, a blurring of the distinction between darkness and brightness, roughness and shine, the diaphanous and the opaque, oppositions all three which Vittone himself specifically posits in his treatise.³⁶⁹ Light is obscured and darkness illuminated: and in the dramatic encounter of the two, played out in Vittone's domes, Fagiolo sees a parallel to the contemplative thought of the Spanish mystic, St. John of the Cross, whereby a clarified faith suffers electrifying contact with divinity, and leaves thereby an imprint of the most luminous rays.³⁷⁰

Vittone's openwork churches were designed at the end the Baroque era. As such they bring to fruition many of the architectural themes of that era, a development that Augusto Cavallari-Murat likens to a harvest:

Guarini and Borromini sowed the seeds, Juvarra and Fontana developed the leaves and flowers, but Vittone and Neumann and Hildebrand produced the fruit, ready for harvest.³⁷¹

all'immaginazione e per superare il confine fra il mondo terrestre e l'eternità del paradiso. E il metodo prescelto era la prospettiva illusionistica."

³⁶⁹ VITTORE, *Istruzioni elementari*, p. 242: "S'appresentano sotto il nome d'Essenza ... l'ombra, e lo splendore, la ruidezza, e pulitezza, la diafaneità, ed opacità."

³⁷⁰ FAGIOLO, "L'universo," p. 138.

³⁷¹ CAVALLARI MURAT, "L'architettura sacra," p. 52: "Guarini e Borromini gettano semi; Juvarra e Fontana sviluppano foglie e fiori; ma Vittone e Neumann e Hildebrandt sono i frutti, pronti per la vendemmia."

But Vittone's openwork churches also stand at the threshold of a new era, the age of Neo-Classicism. Indeed, Portoghesi has demonstrated how Vittone's work is divided into two phases.³⁷² The first phase of his work, prior to 1750 and belonging still to the age of the Baroque (the age of Rococo as Portoghesi describes it), is distinguished by an architecture of manifold spaces illuminated by indirect, reflected light. The second phase, after 1750 and belonging increasingly to the age of Neo-Classicism (the age of Enlightenment as Portoghesi describes it), is distinguished by an architecture of integral spaces illuminated by direct, incidental light.³⁷³ It is to the first phase of his practice that the bulk of Vittone's illusionistic and scenographic designs belong, including those for his openwork churches.

As the artistic and intellectual culture of Neo-Classicism established itself during the latter half of the eighteenth century, the illusionistic arts fell increasingly out of fashion. *Trompe l'oeil* painting, *quadratura* painting, and *apparati* for the *Quarant'ore* devotion, for example, while they continued to be produced during this time, were increasingly relegated to the margins, and Vittone's own church architecture after 1750, and certainly after 1760, became largely devoid of the scenographic, illusionistic, and optical qualities that characterize so much of his earlier production. During the last decade of his practice, between 1760 and his death in 1770, Vittone no longer designed openwork domes, and no longer did he accouter the dome in the manner of a

³⁷² PORTOGHESI, *Bernardo Vittone*, pp. 129-133, 134-146.

³⁷³ But see also R. POMMER, Review of *Bernardo Vittone, un architetto tra illuminismo e Rococo*, by P. Portoghesi, *The Art Bulletin* LIII:1 (March 1971), pp. 124-125, here p. 124, who notes that Portoghesi does not show how the Neo-Classicism of Vittone's late practice differs from the academic classicism of his youth.

stage set. Instead, he devised simple and conventional domes with no concealed windows, no light chambers, no multiple and perforated shells, no interlaced ribs, and no open pendentives.

In summary, Vittone's openwork domes may be understood to have functioned as sacred theater, with the multiple, perforated shells corresponding to the wings, and the concealed windows corresponding to the concealed lamps, of a stage set. Indeed, like the stage set for the sacred theater, Vittone's openwork domes serve as much to charm and delight spectators as to instruct them and inspire them to piety. As such Vittone's domes perform simultaneous didactic and entertainment functions in which both illumination and illusion are brought to bear to propagate religious truth even as they also succeed in satisfying the voluptuous genius of the eye.

CONCLUSION

The late Professor Colin Rowe was fond of playing an academic parlor game with his students and colleagues whereby various architects of certain renown are evaluated according to the quality of their talent and ideas.¹ On one such occasion, during the course of play, Guarini and Juvarra came to be singled out for comparison, with the former roundly judged to have possessed incredibly good ideas but not equally conspicuous talent, and the latter to have possessed extraordinary talent but not many ideas of quality. This in turn led to a consideration of Vittone, who, though deemed “a provincial — more or less,” was put forth as a “superb mediator” between the two. And so the question was posed: what about Vittone? Before any verdict could be rendered, however, the telephone rang and everyone was off to dinner, the game ending abruptly without further discussion of the matter.

Still, for our purposes, the question remains. What about Vittone? The implication is that, as a “superb mediator” between the two, Guarini and Juvarra, Vittone possessed both talent and ideas. And indeed, examples of Vittone’s talent are plain enough to see, as, too, are examples of his ideas, and in particular, the hollowed-out pendentive, which, as Richard Pommer tells it, constitutes Vittone’s “most original — his one original — idea.” Yet Vittone was not so much an original thinker as an eclectic one. His contribution primarily was to integrate and synthesize the various, often competing and contradictory strands of Baroque architecture: i.e., the academic and the

¹ C. ROWE. “Talento e idea: Una conferenza / Talent and Ideas: A Conference,” *Lotus International* no. 62 (1989): 7-13; reprinted as “Ideas, Talent, Poetics: A Problem of Manifesto,” in idem., *As I Was Saying: Recollections and Miscellaneous Essay*, edited by A. Caragonne, 3 vols. (London and Cambridge, Mass., 1996), II, pp. 277-354.

bizarre, the conventional and the capricious, the serious and the playful, the restrained and the exuberant, the orthodox and the unorthodox, the traditional and the modern, the Fontanesque and Guarinesque modes of design. Vittone was not the first to achieve this. Previous architects, notably Gherardi and Juvarra, had combined various strands, in particular the Berninian and Borrominian strands, of Baroque architecture to achieve a happy synthesis. Vittone's contribution, however, was to extend and expand the scope of eclecticism to include references not only to Bernini and Borromini, but also to Guarini and others, to produce a comprehensive and compelling synthesis of the highest order.

Vittone conceived the openwork dome as a sacred theater, and in so doing he translated transient scenographic decoration into permanent architecture, a *theatrum sacrum perpetuum*, continuing and consummating a development that had begun a century before. Toward this end he employed a multitudinous array of illusionistic devices — light chambers, vertex openings, hidden windows, interlaced ribs, multiple and perforated shells, open pendentives, perspectival diminutions, none of which he invented save for the hollowed-out pendentive — in the manner of the concealed lamps, wings, and backcloth of a stage set, all brought together on a centralized plan to concentrate and accentuate the scenographic effect. Still, he was not the first to treat the dome as a sacred theater. The idea was not original to Vittone, but to Gherardi and the Galli Bibiena, to painters and stage set decorators mainly, but also to Guarini. What Vittone succeeded in doing was to refine and perfect the idea, and give it its consummate expression. Again, the scope of Vittone's eclecticism was wide-ranging, with references made not only to the contributions of architects and scenographers — Bernini, Borromini,

Guarini, Fontana, Fischer von Erlach, Gherardi, Juvarra, Pozzo, and the Galli Bibiena — but also to the contributions of *quadraturisti*, and in particular the *quadraturisti* who practiced in the rural provinces of Piedmont where Vittone built his churches — Dallamano, Alberoni, Bettini, Rosso di Busca, and the Pozzos — to produce a scenographic architecture of exceptional persuasion and authority. Again, the force of Vittone's idea lies not so much in its novelty, as in its broad eclecticism and power of synthesis.

Vittone's sensibility for scenographic design was first developed in Rome, where, as a student at the Accademia di San Luca, he copied scenographic caprices. It was this academic training that largely accounts for the highly illusionistic character of Vittone's Guarinesque architecture. Beginning with his *Concorso Clementino* competition project of 1732, and continuing for more than a decade thereafter, Vittone frequently adapted perspectival diminutions and other optical devices to his building designs, and this for the stated purpose to please the spectator's eye, but also to correct the visual appearance of such buildings which, for one reason or another, suffered from being too narrow or small. The illusionistic quality associated with Vittone's temporary decorations repeats that which is found in his permanent architecture, in the emphasis placed upon a building's appearance, its accidents, its ornament, its charming effects, its playfulness, its novelty, its variety, its symbolic and allegorical content, and above all its capacity to satisfy and delight the eye. Indeed, Vittone distinguished little between the temporary *apparato* for the *Quarant'ore* devotion and the permanent church building in this regard, requiring of both that they be gracefully sized and proportioned, that they be designed in the appropriate style, that their

ornaments depict concepts, facts, or else stories of historic or symbolic import, and that they be prominently placed and clearly visible to the spectator.

Thus while Pommer is undoubtedly correct in identifying Vittone as essentially a provincial architect, one whose Neo-Guarinianism, in particular, but also his entire *oeuvre*, is aptly gauged against the regional activities of Plantery, Gallo, Michela, Nicolis di Robilant, Buniva, Richiardi, Quarini, and other provincial architects working in the Piedmontese tradition, it is nevertheless also true that Vittone's work is characterized by a distinct cosmopolitanism gained from his apprenticeship to Juvarra and academic training in Rome, and from his direct and comprehensive exposure at an early age to Fontana's drawings and Guarini's writings. It is this cosmopolitanism that accounts for Vittone's illusionistic and scenographic manner of design that is essentially lacking in the work of his Piedmontese compatriots. In short, Vittone drew freely and extensively upon both traditions — the provincial and the cosmopolitan — to accomplish his wider synthesis.

And so, to return to Professor Rowe's long delayed parlor game, and to venture forth a verdict at long last: it is evident that Vittone commanded both ideas and talent of notable merit, although assuredly his ideas were no match for those of Guarini, and his talent no match for that of Juvarra. It was through the force of the two combined, his ideas and his talent, informed by a broad and comprehensive eclecticism, that Vittone achieved his remarkable success. In so doing Vittone synthesized many and various strands of Italian Baroque and Rococo architecture for which his centrally planned, openwork churches stand as a fitting summa.

APPENDIX



Figure 1.1. Vittone, Altar, Sant' Ignazio, Lanzo, 1725-27 (*Istruzioni diverse*, pl. 93).

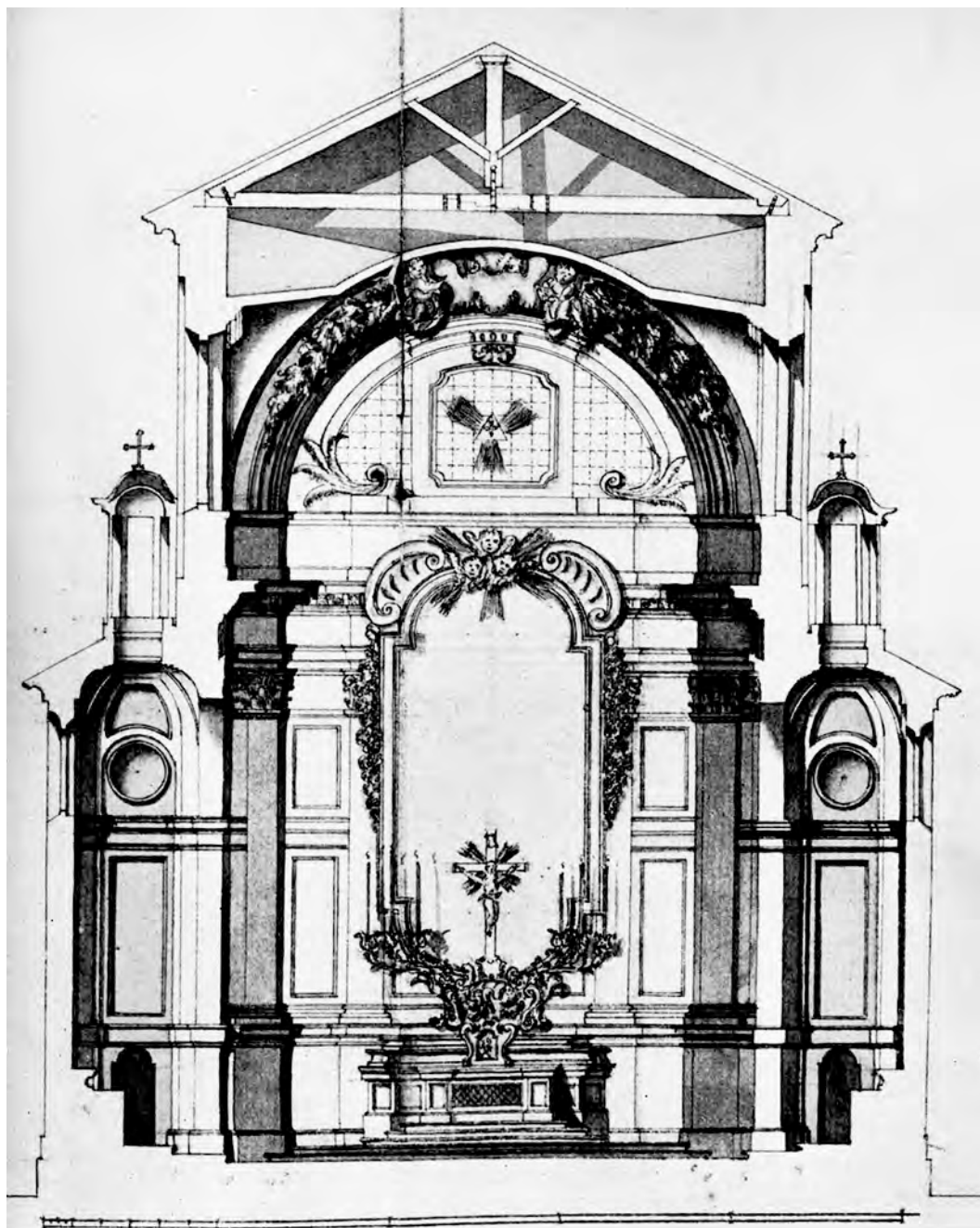


Figure 1.2. Vittone, Santa Maria della Neve, Pecetto, 1730-39, transverse section (Turin, Museo Civico).

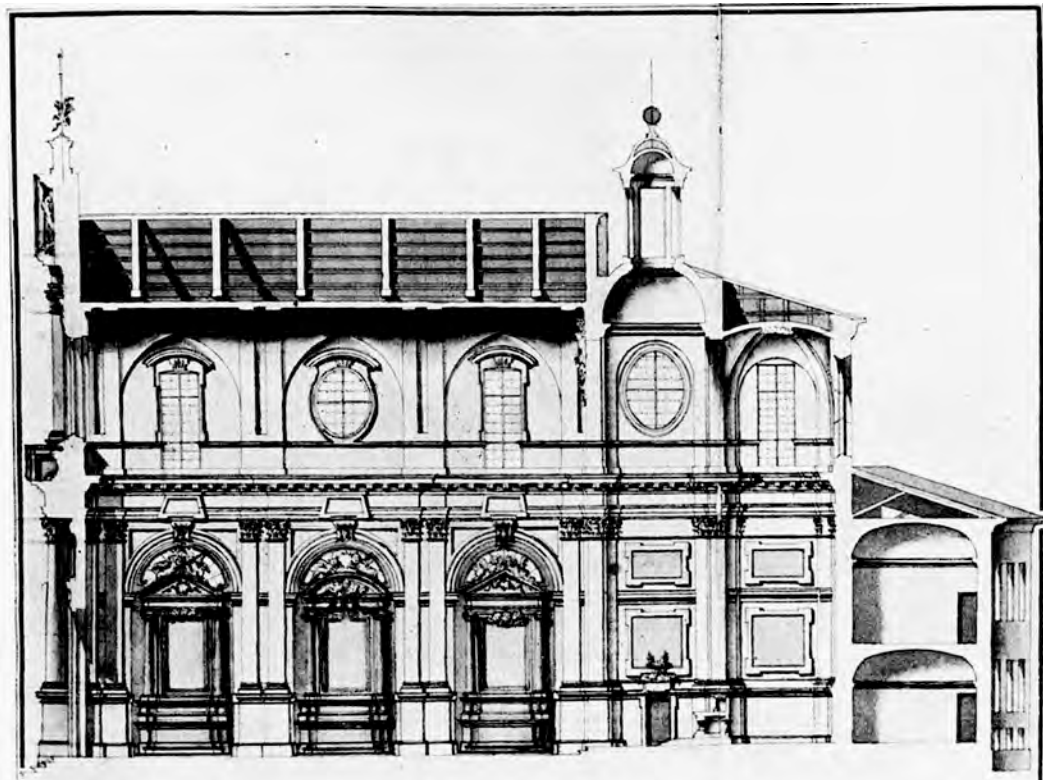


Figure 1.3. Vittone, Santa Maria della Neve, Pecetto, 1730-39, longitudinal section (Turin, Museo Civico).

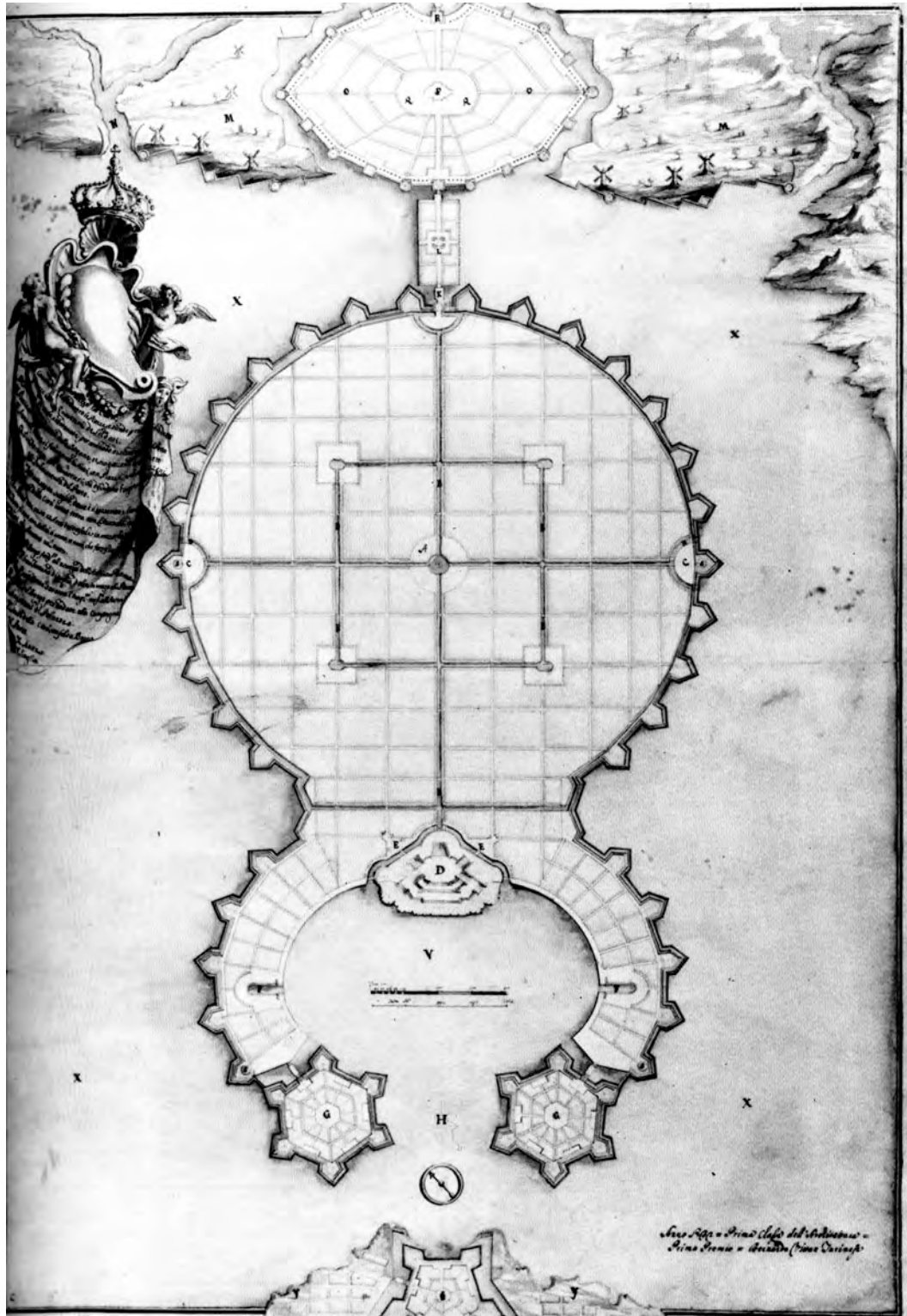


Figure 1.4. Vittone, Project for a City Surrounded by the Sea, 1732, general plan (Rome, Accademia di San Luca).

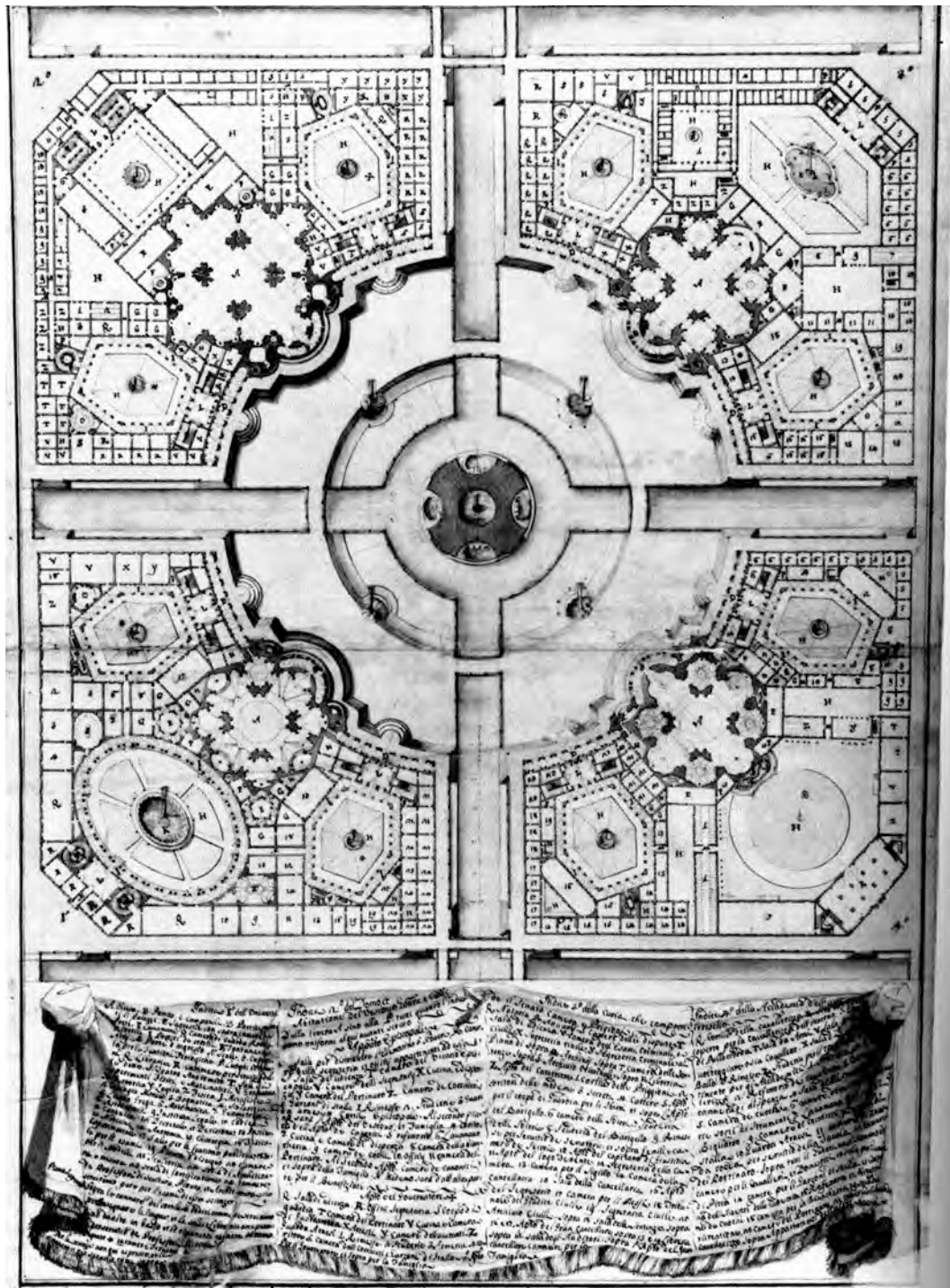


Figure 1.5. Vittone, Project for a City Surrounded by the Sea, plan of grand piazza (Rome, Accademia di San Luca).

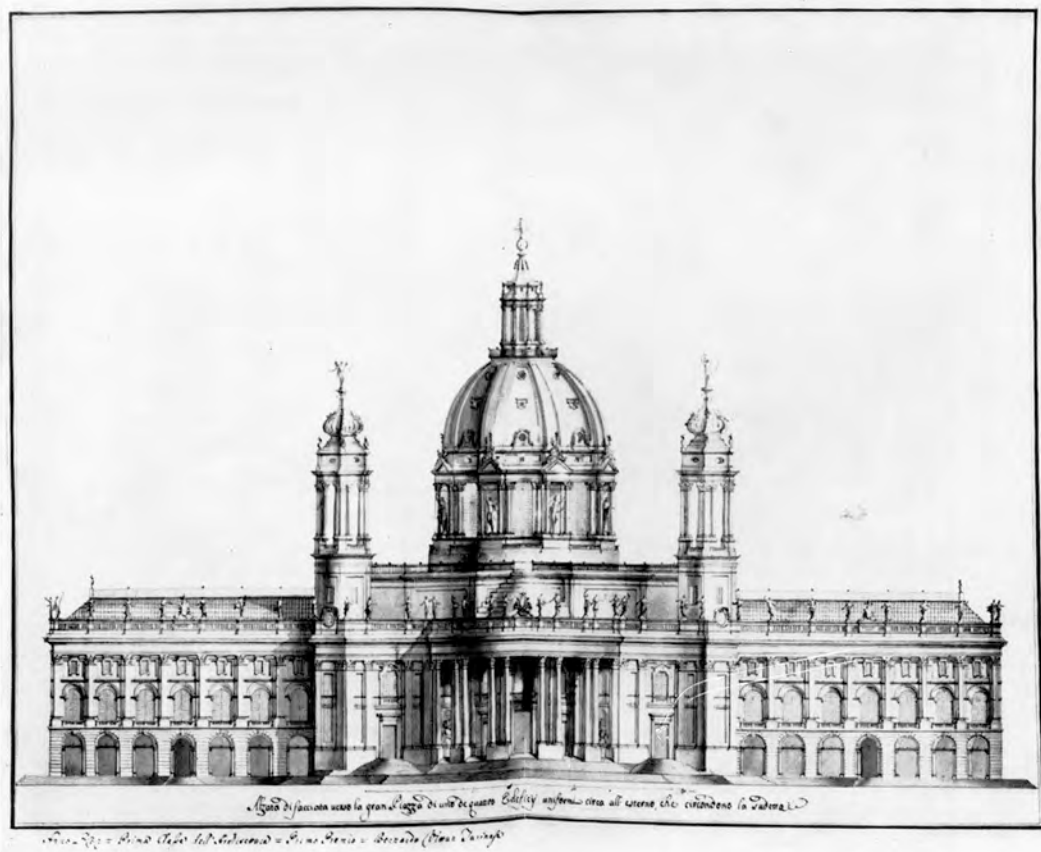


Figure 1.6. Vittone, Project for a City Surrounded by the Sea, 1732, elevation of church facing the grand piazza (Rome, Accademia di San Luca).

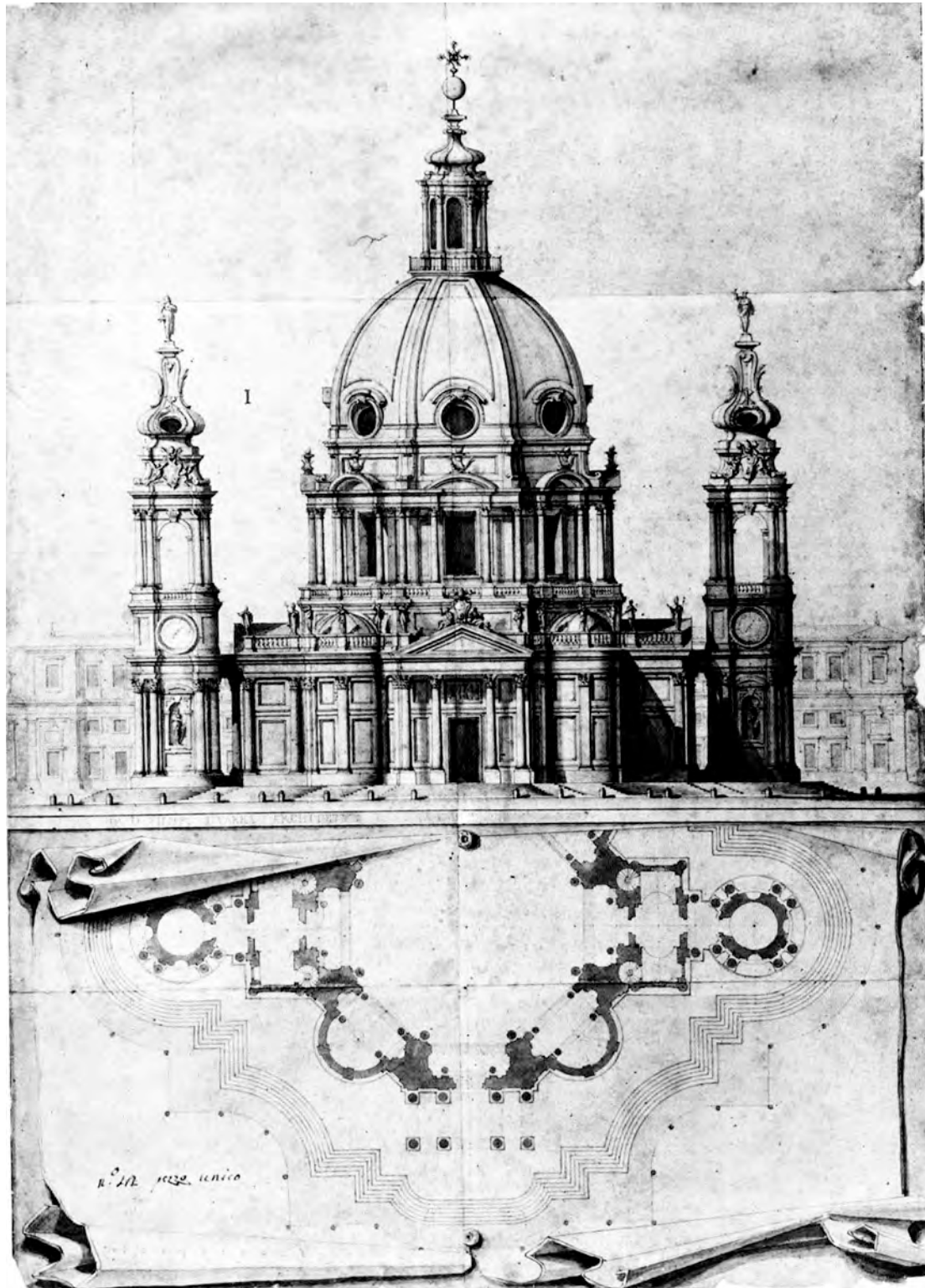


Figure 1.7. Juvarra, Project for a Church, 1707, elevation and plan (Rome, Accademia di San Luca).

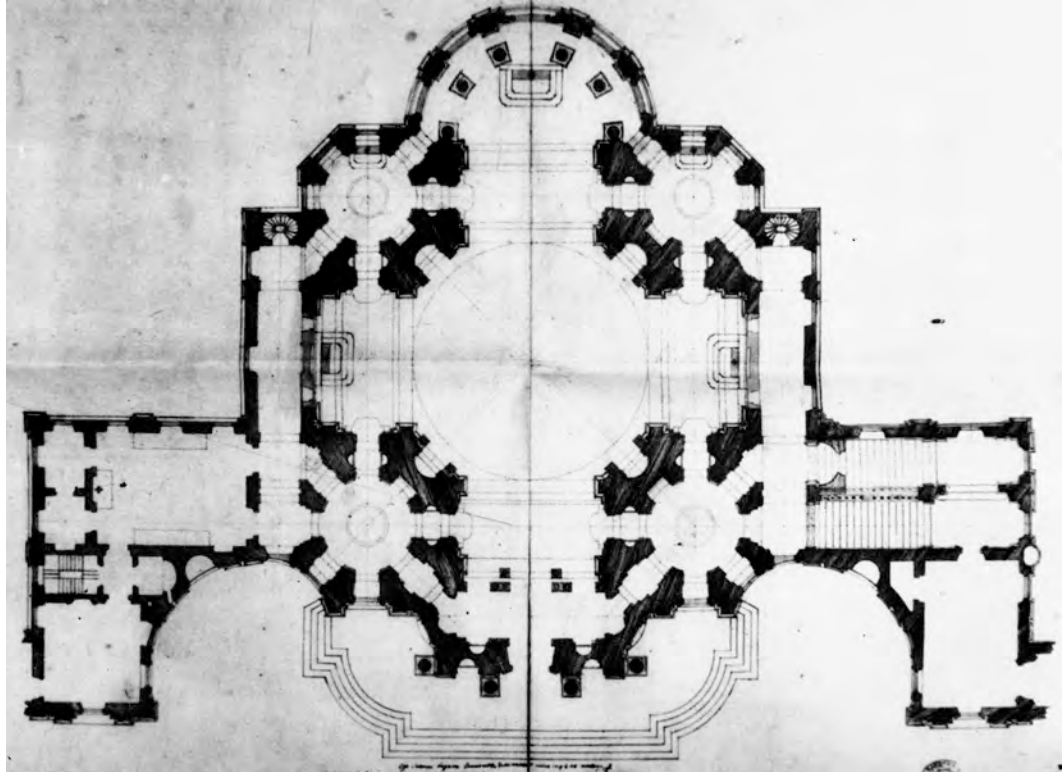


Figure 1.8. Juvarra, Sant'Uberto, Venaria Reale, 1716-31, plan (Turin, Biblioteca Nazionale).

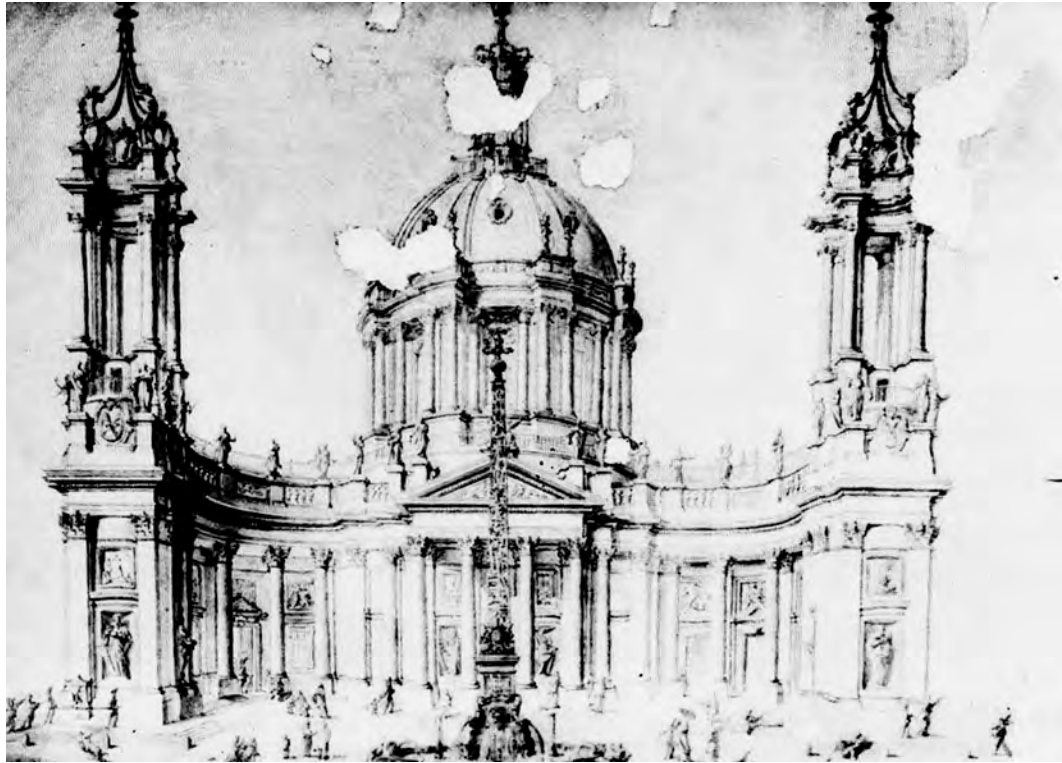


Figure 1.9. Vittone, Project for a Temple of Moses, 1733, elevation (Rome, Accademia di San Luca).

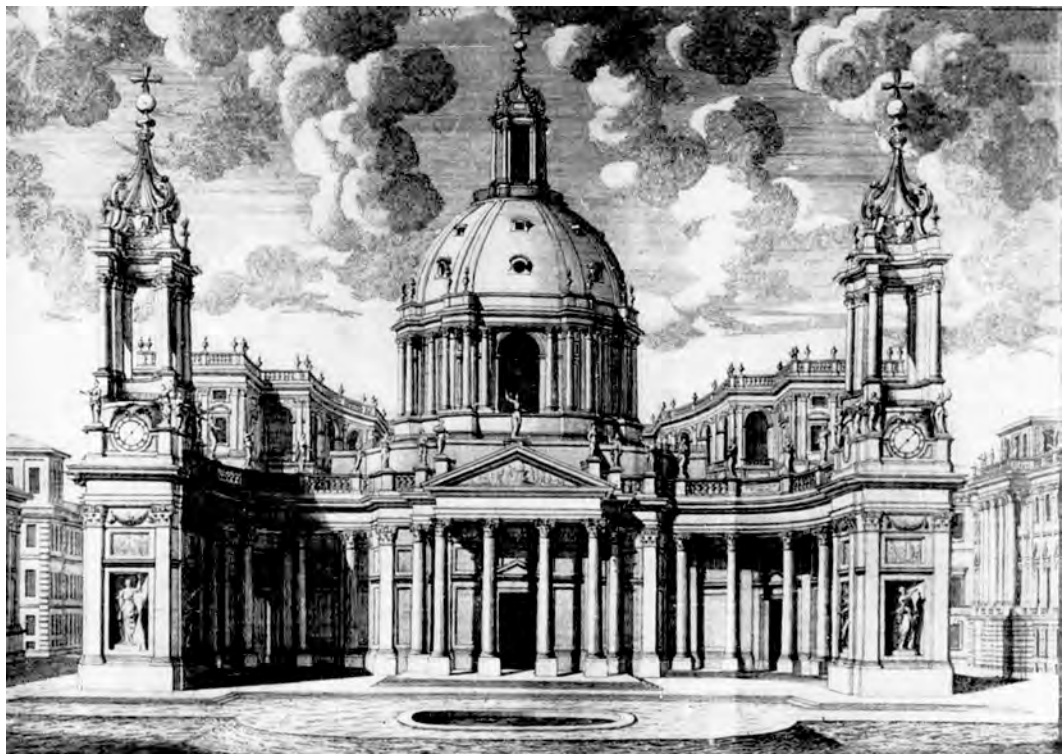


Figure 1.10. Vittone, Project for a Church, elevation (*Istruzioni elementari*, pl. 75).

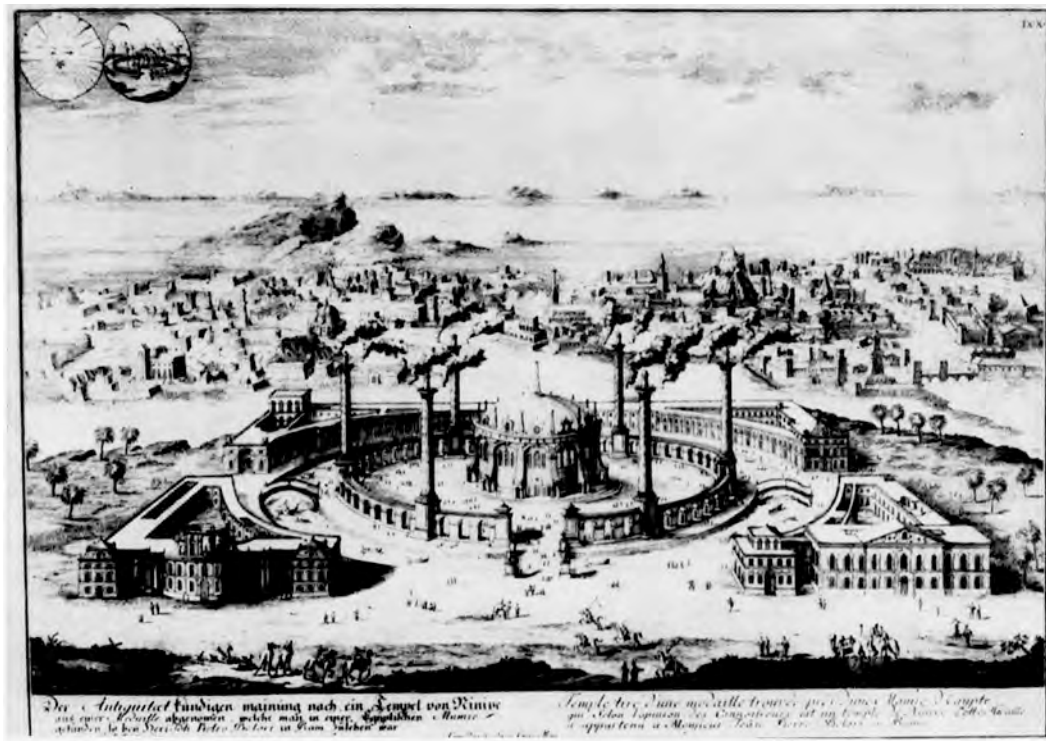


Figure 1.11. Fischer von Erlach, Reconstruction of the Ancient Temple at Nineveh (*Historischen Architektur*, II, pl. 10).



Figure 1.12. Vittone, Project for a City Surrounded by the Sea, 1732, elevation of bridge with triumphal arch (Rome, Accademia di San Luca).



Figure 1.14. Fischer von Erlach, Reconstruction of the Statue of Zeus at Olympia (*Historischen Architektur*, I, pl. 5).

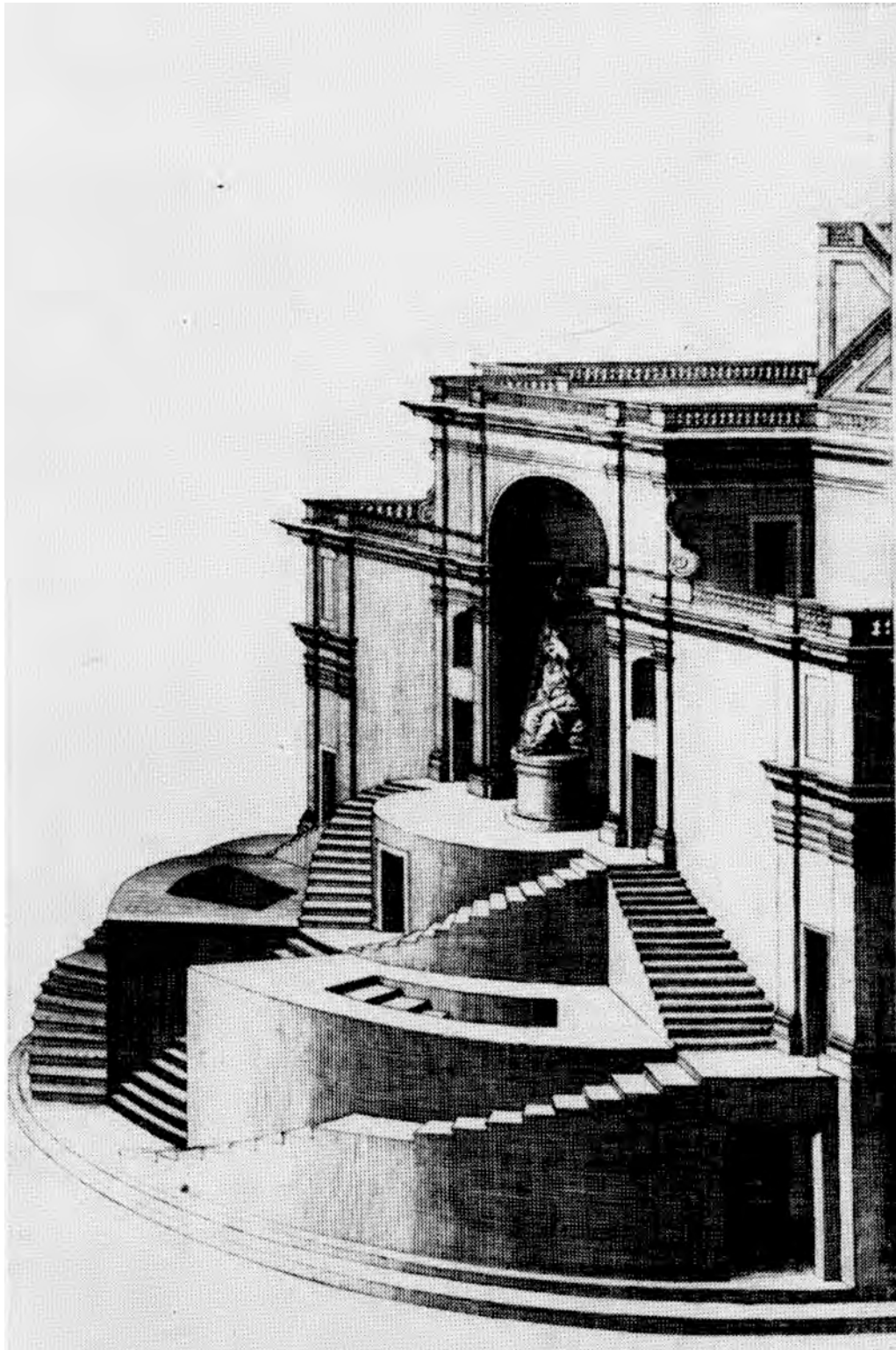


Figure 1.15. Pozzo, Staircase with Statue of Roma/Minerva in a Niche (*Perspectiva Pictorum*, II, fig. 113).

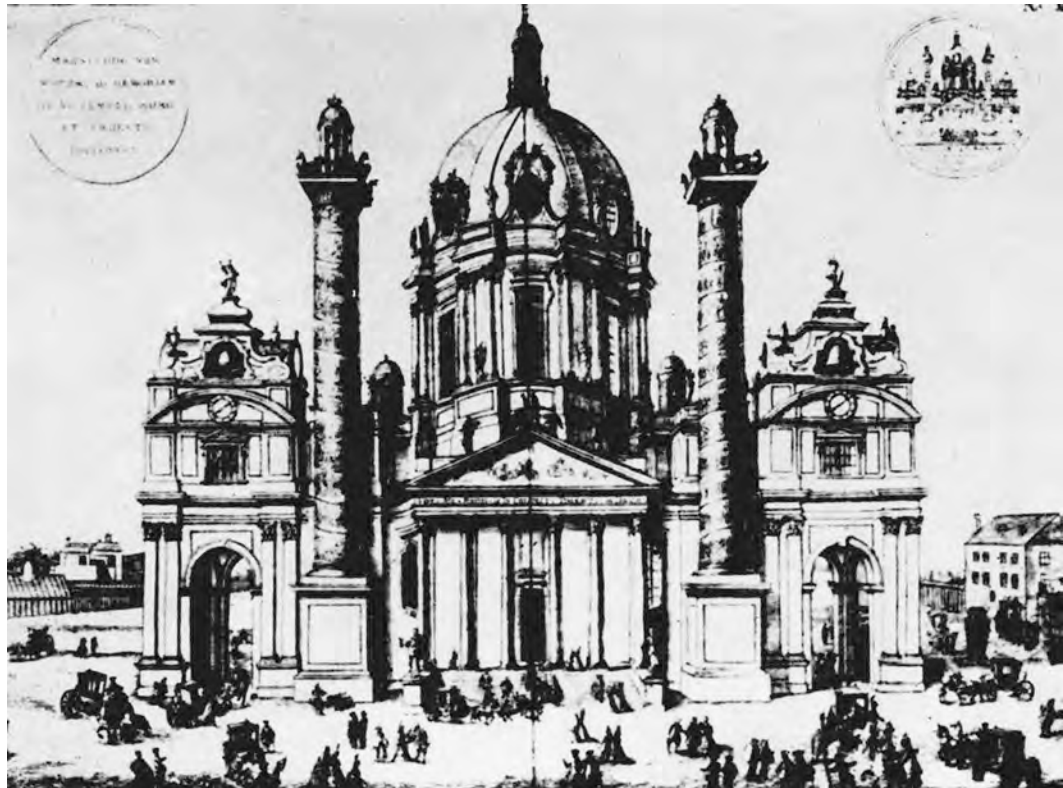


Figure 1.16. Fischer von Erlach, Karlskirche, 1715-38 (*Historischen Architektur*, IV, pl. 12).



Figure 1.17. Vittone, *Ancient Roman Ruins with Colosseum (Istruzioni elementari, Frontispiece)*.

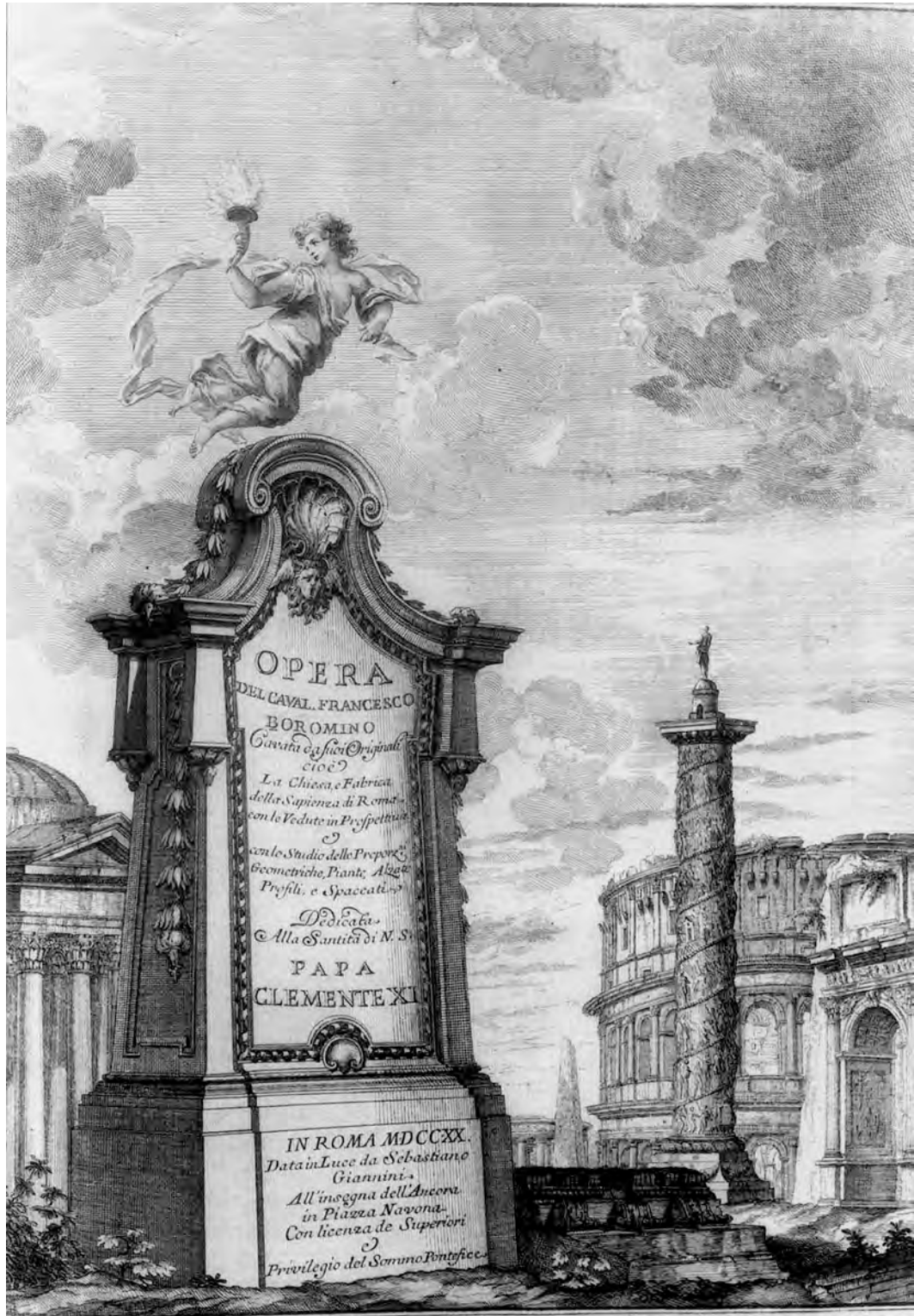


Figure 1.18. Borromini, Ancient Roman Ruins with Colosseum (*Opus Architectonicum*, Frontispiece).

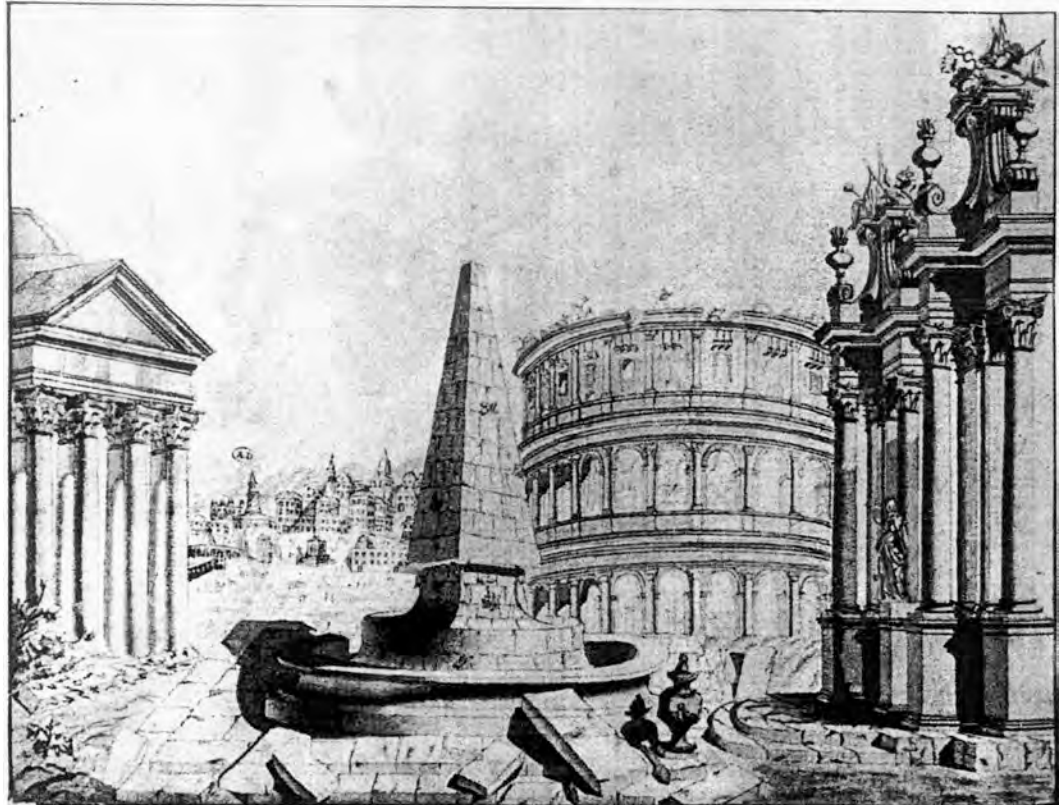


Figure 1.19. Vittone, Sketch of Ancient Roman Ruins with Colosseum, 1730s (Paris, Musée des Art Décoratifs).



Figure 1.20. Fischer von Erlach, Scenographic Colonnade (*Historischen Architektur, Frontispiece*).

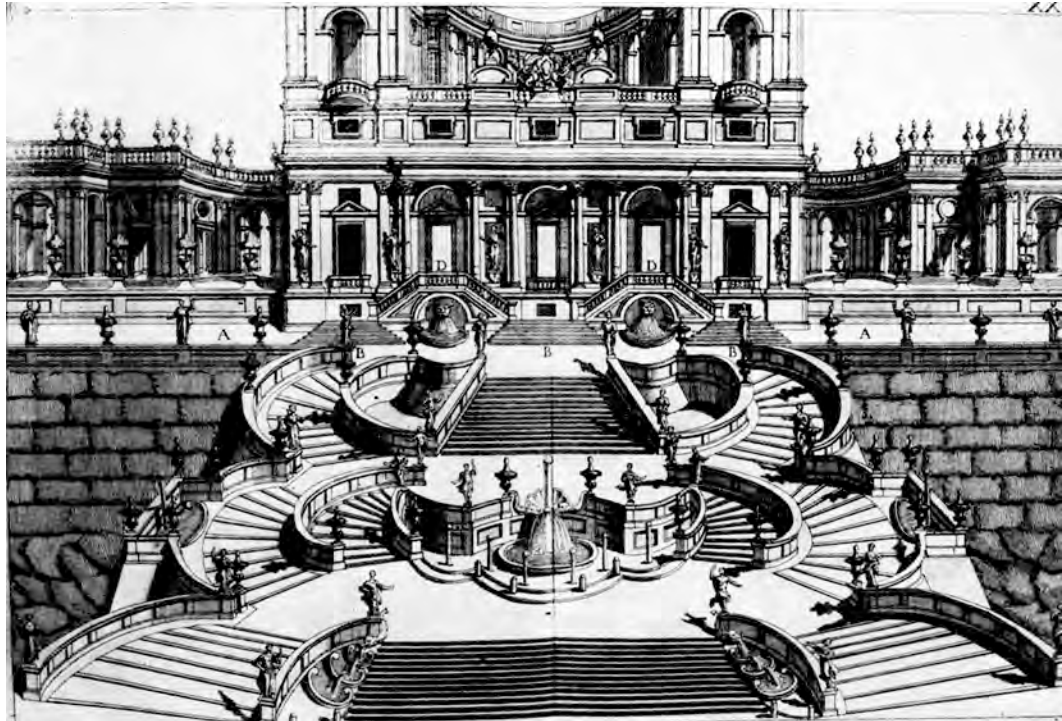


Figure 1.21. Vittone, Project for Monumental Stairs (*Istruzioni diverse*, pl. 22).

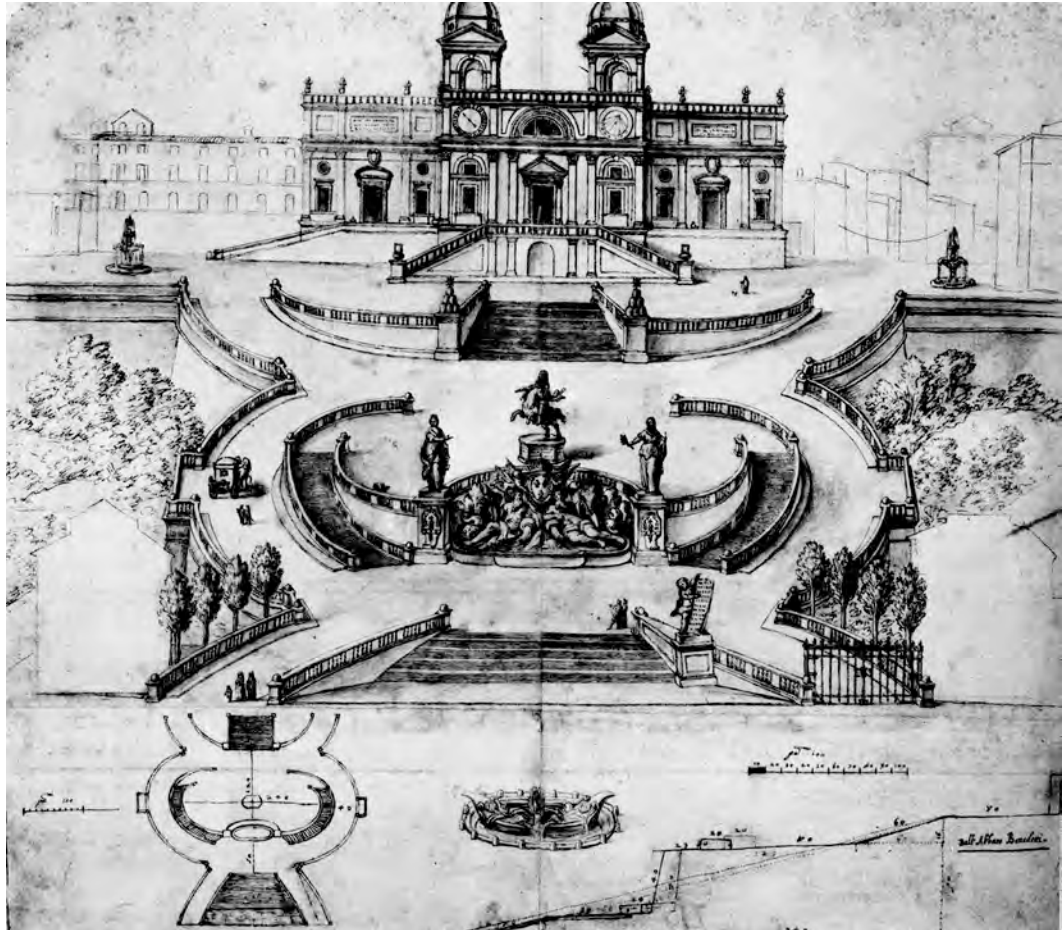


Figure 1.22. Benedetti, Project for the Pincio, Rome, 1660s (Biblioteca Apostolica Vaticana).

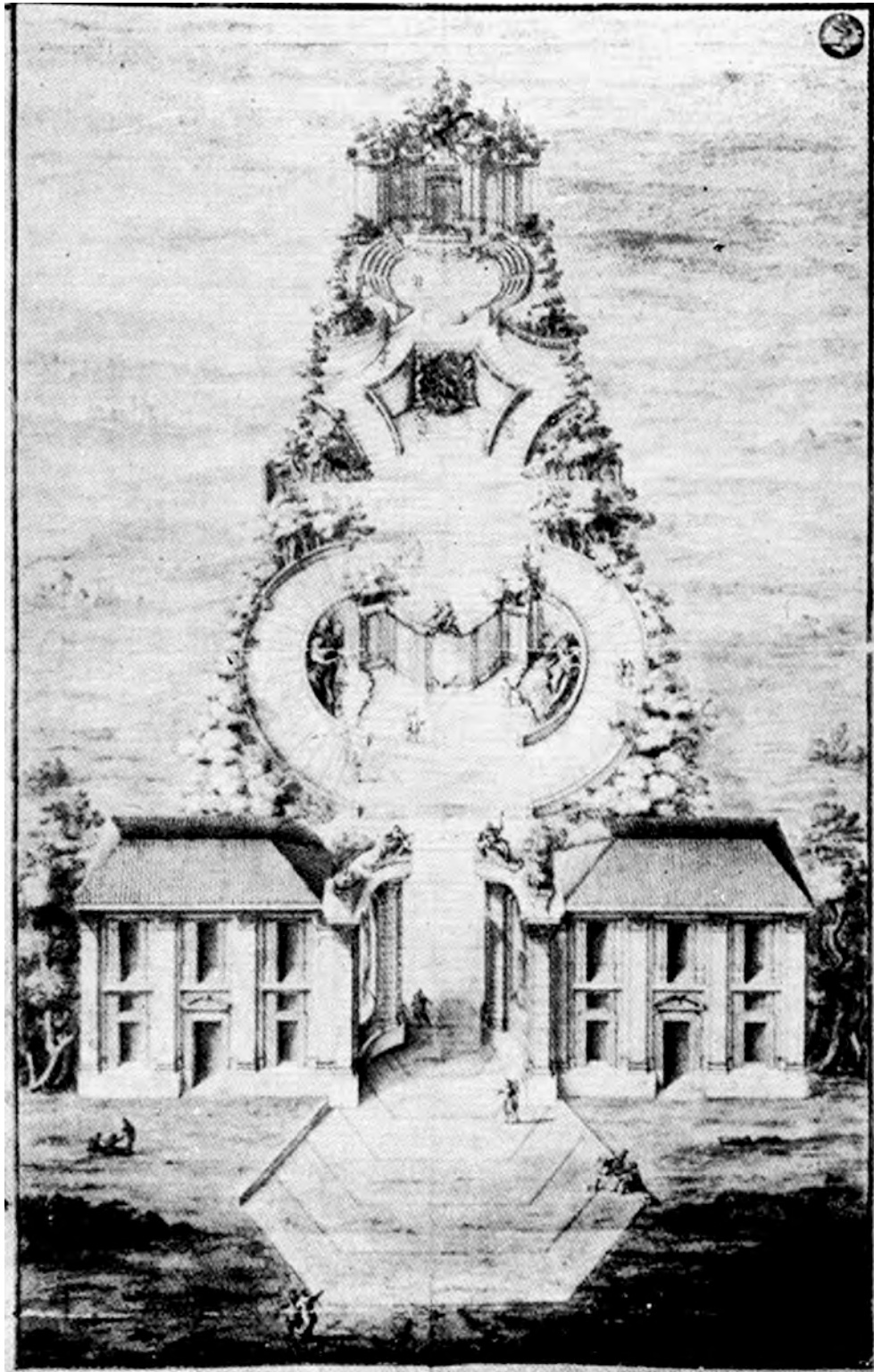


Figure 1.23. Canevari, Project for the Bosco Parrasio, 1725 (Rome, Accademia di San Luca).

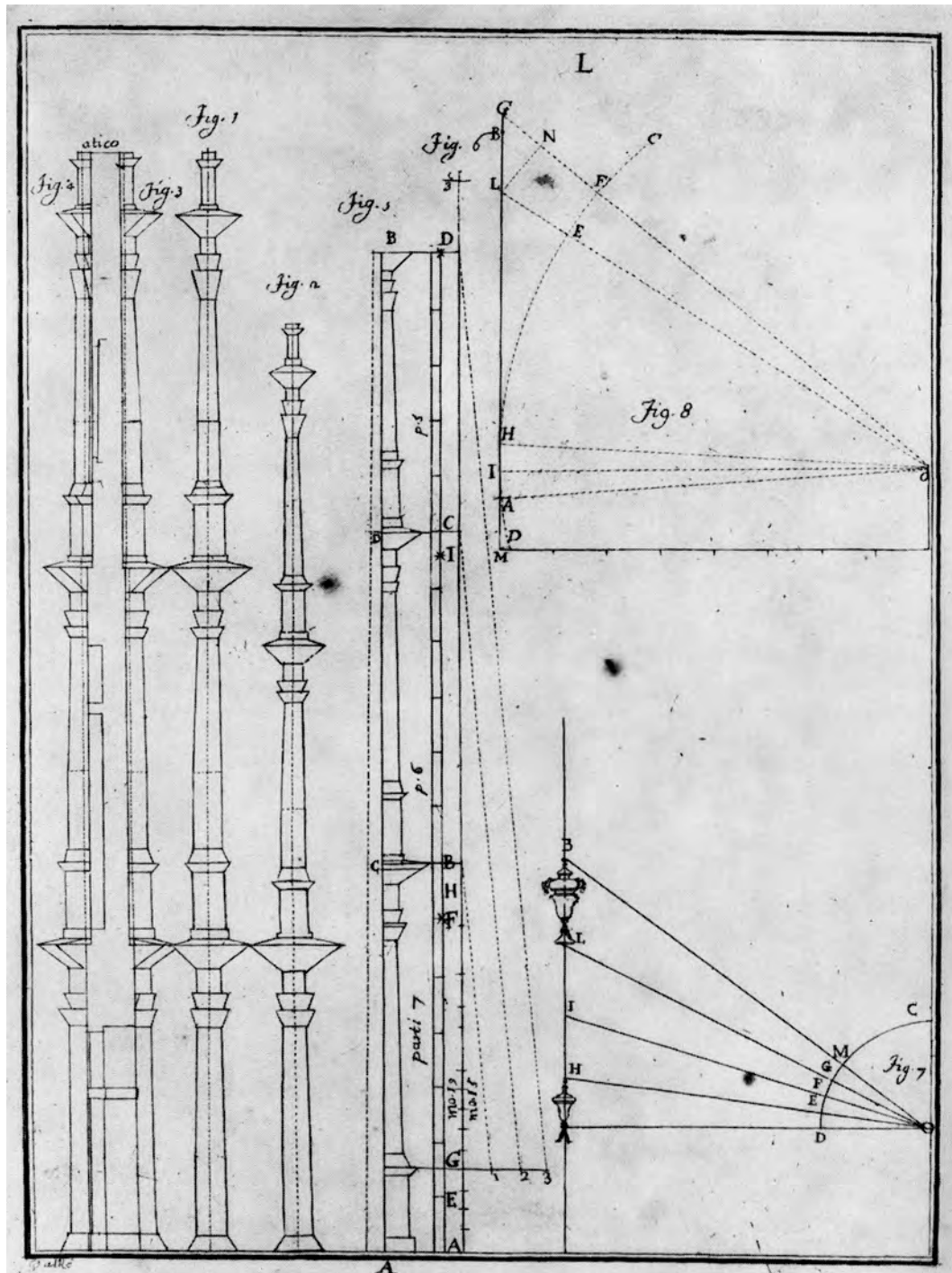


Figure 2.1. Vittone, Superimposed Orders (*Istruzioni elementari*, pl. 50).

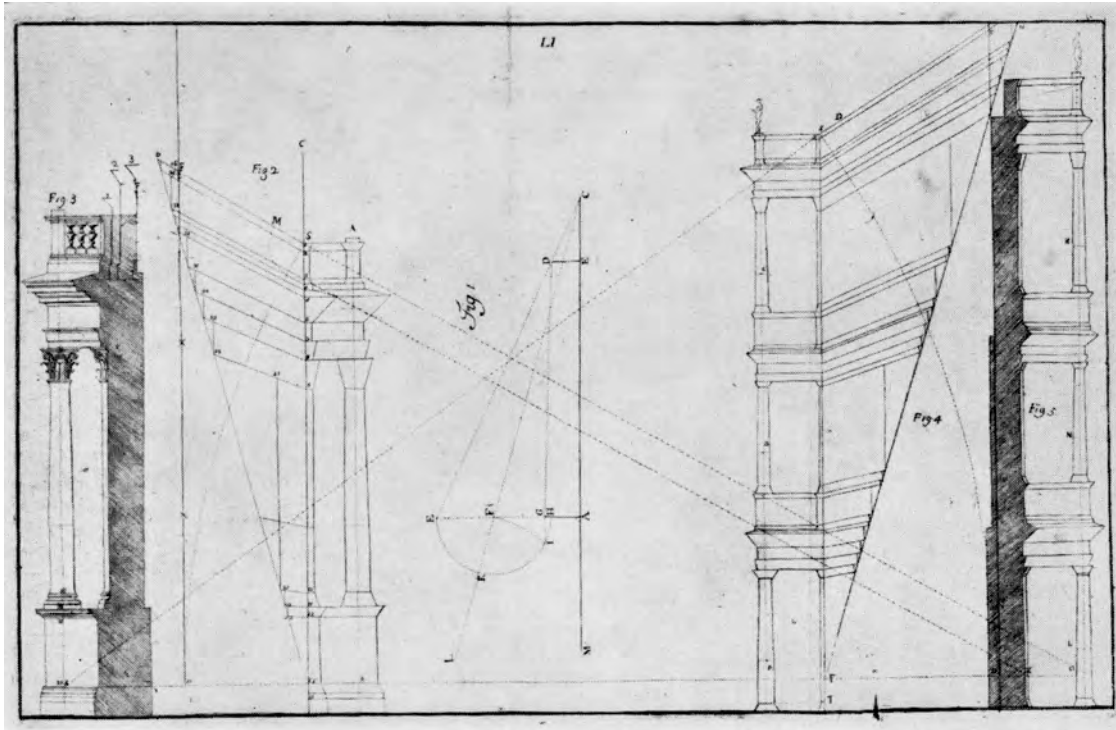


Figure 2.2. Vittone, Optical Corrections of the Orders (*Istruzioni elementari*, pl. 51).



Figure 2.3. Juvarra, Palazzo Birago di Borgaro, Turin, 1716, garden façade with perspectival window.



Figure 2.4. Juvarra, Palazzo Birago di Borgaro, Turin, 1716, rear courtyard with perspectival blind portal.

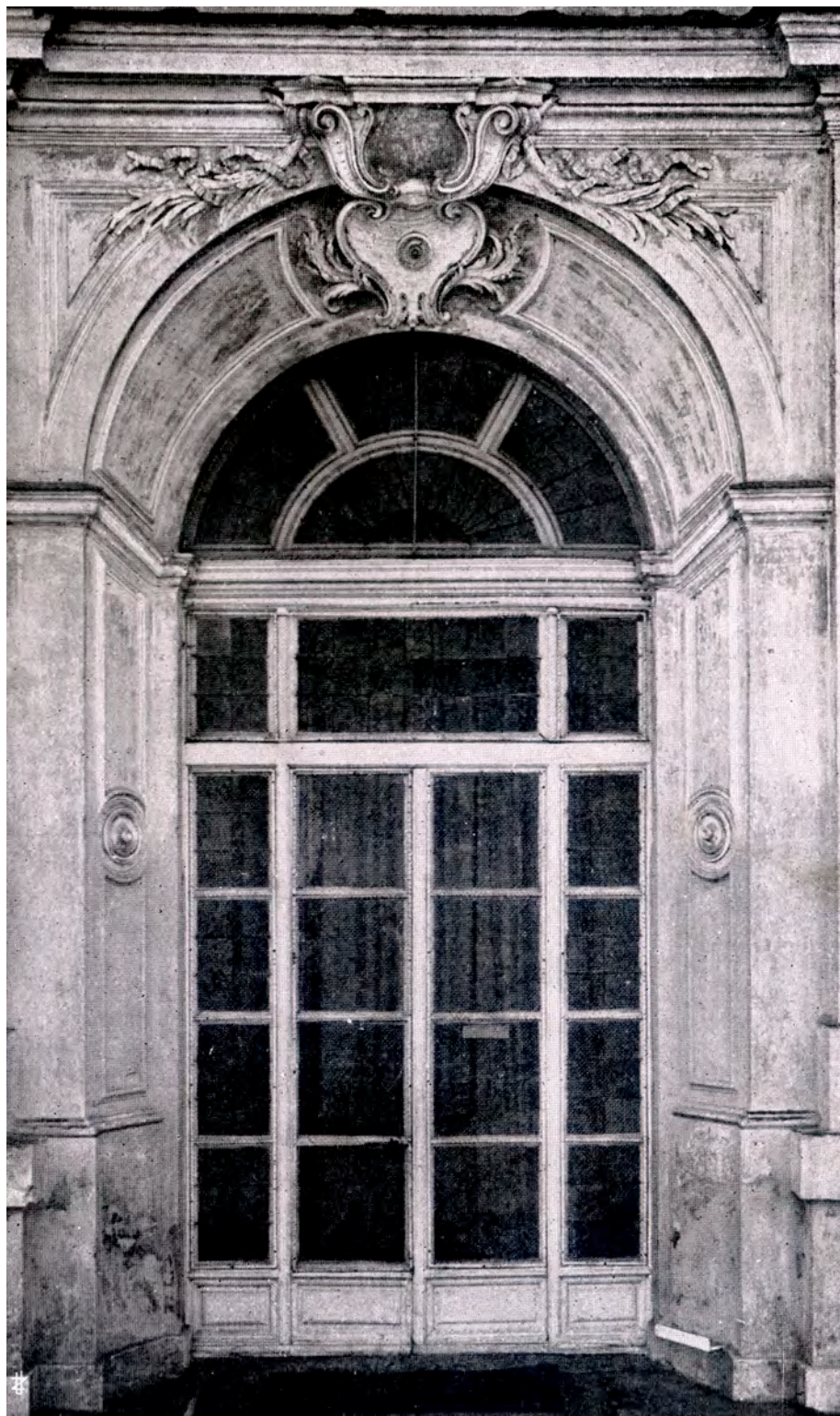


Figure 2.5. Juvarra, Palazzina, Stupinigi, 1729-35, perspectival window.



Figure 2.6. Plantery, Palazzo Cavour, Turin, 1729, court of honor with perspectival portal.

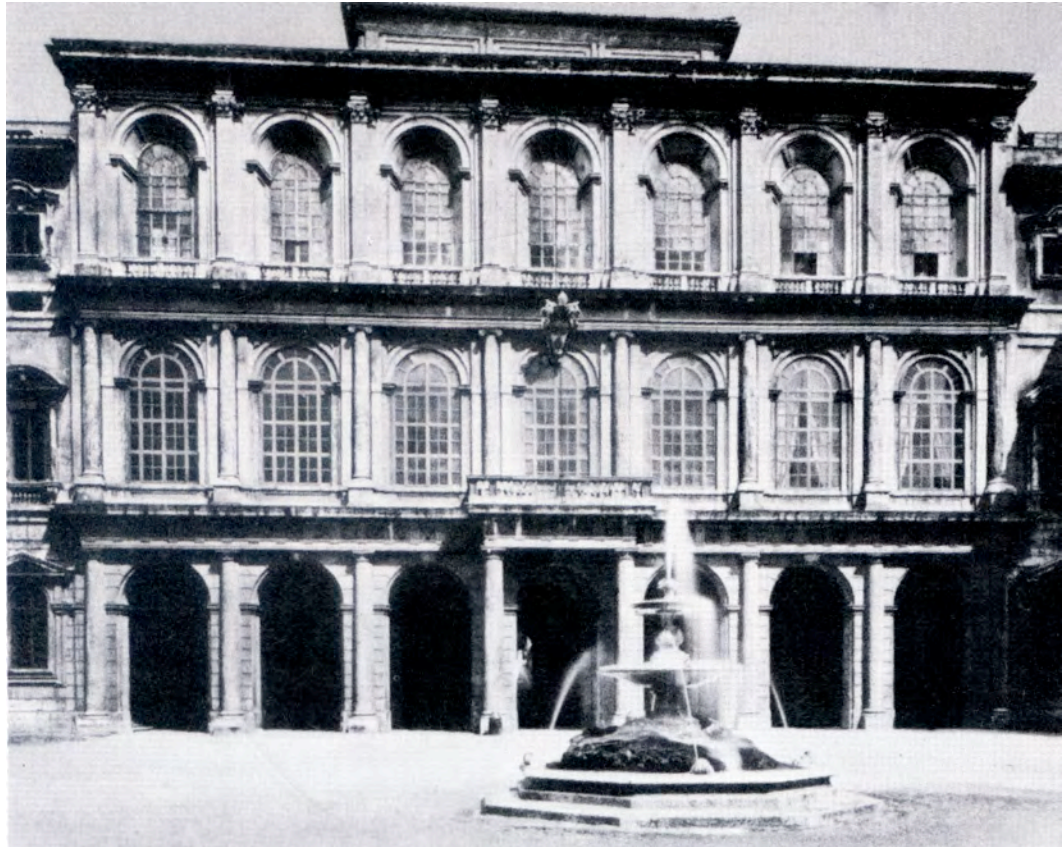


Figure 2.7. Maderno, Palazzo Barberini, Rome, 1628-33, west façade.

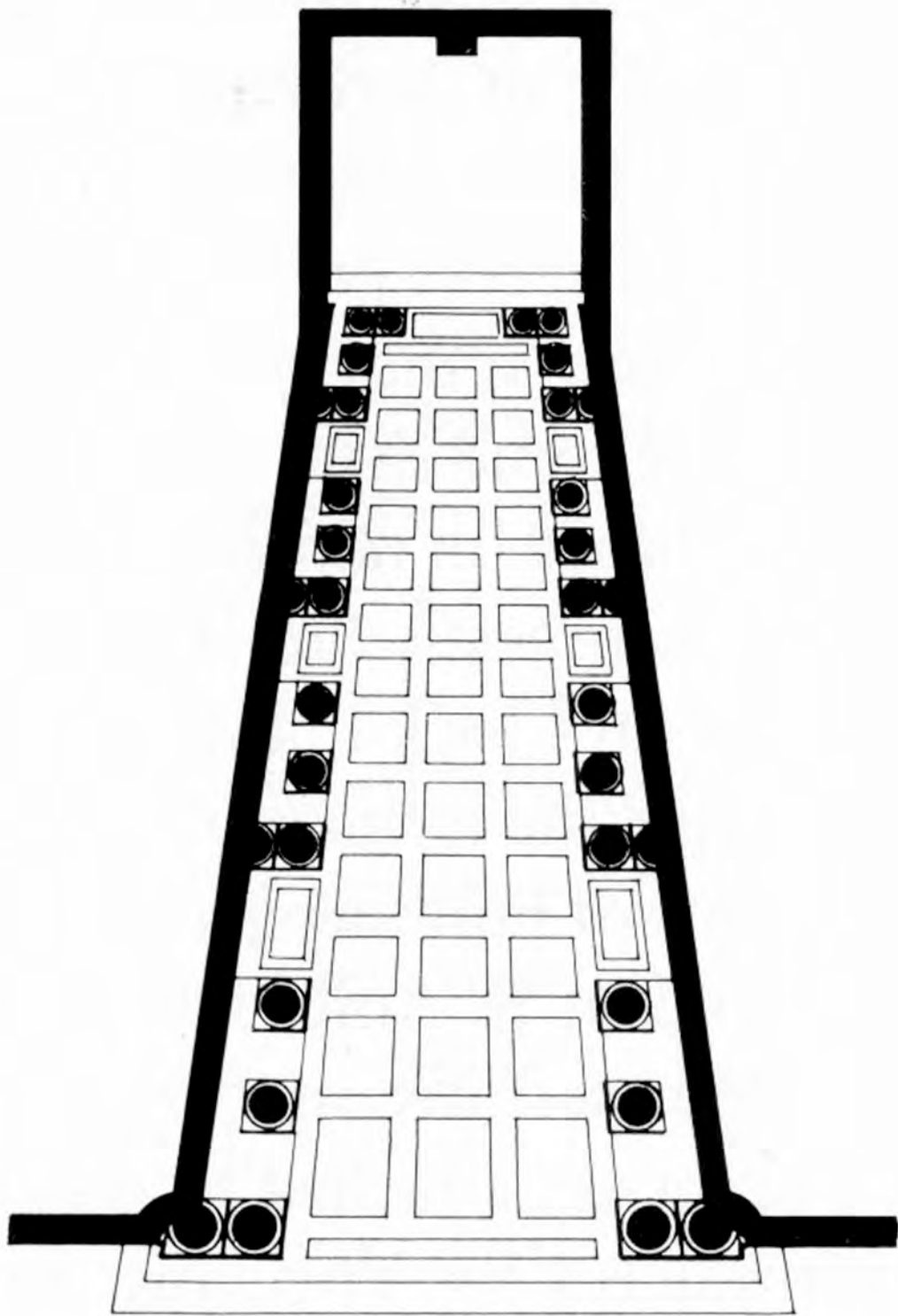


Figure 2.8. Borromini, Palazzo Spada, Rome, 1652-53, plan of garden passageway.

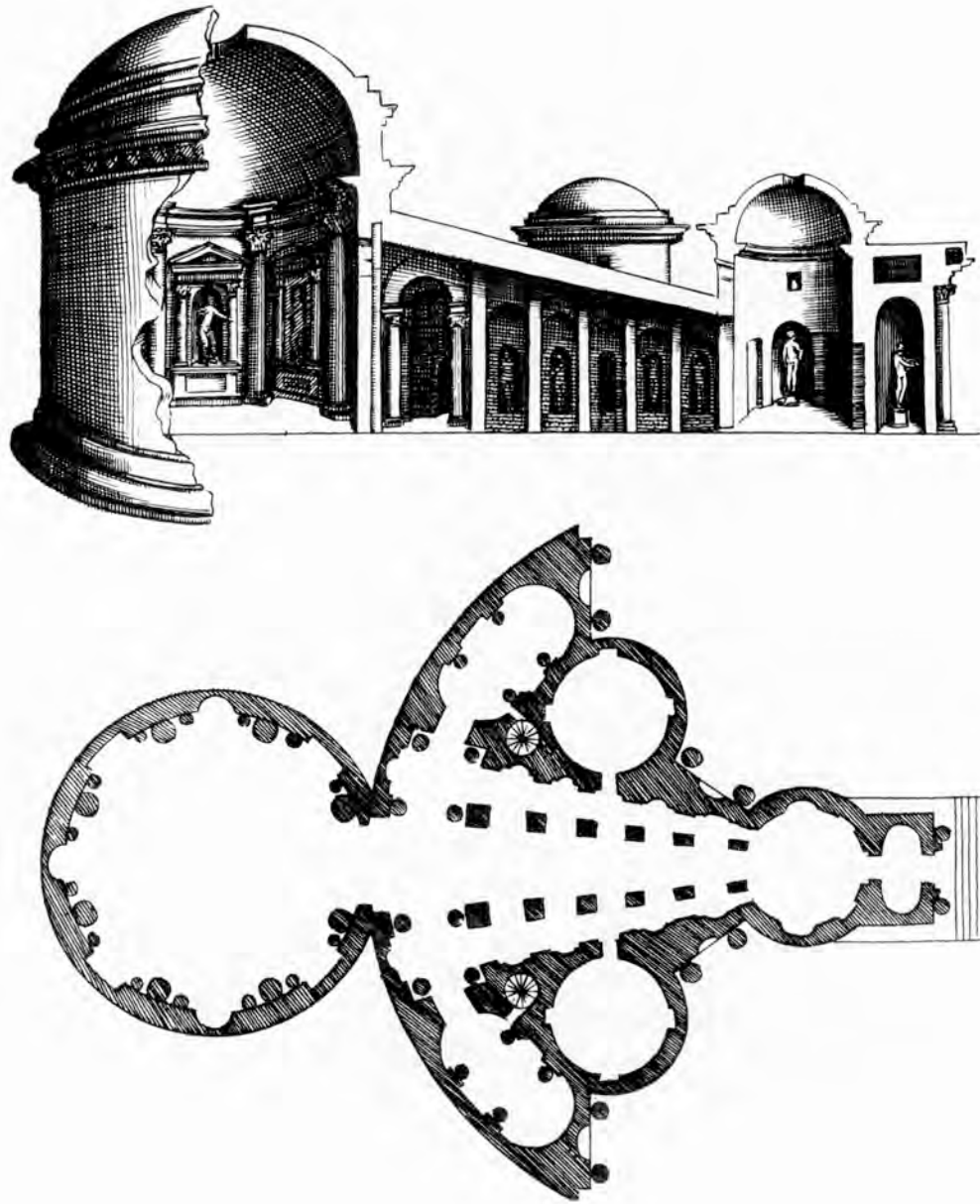


Figure 2.9. Montano, Reconstruction of an Ancient Building (*Li cinque libri*, III, pl. 3).

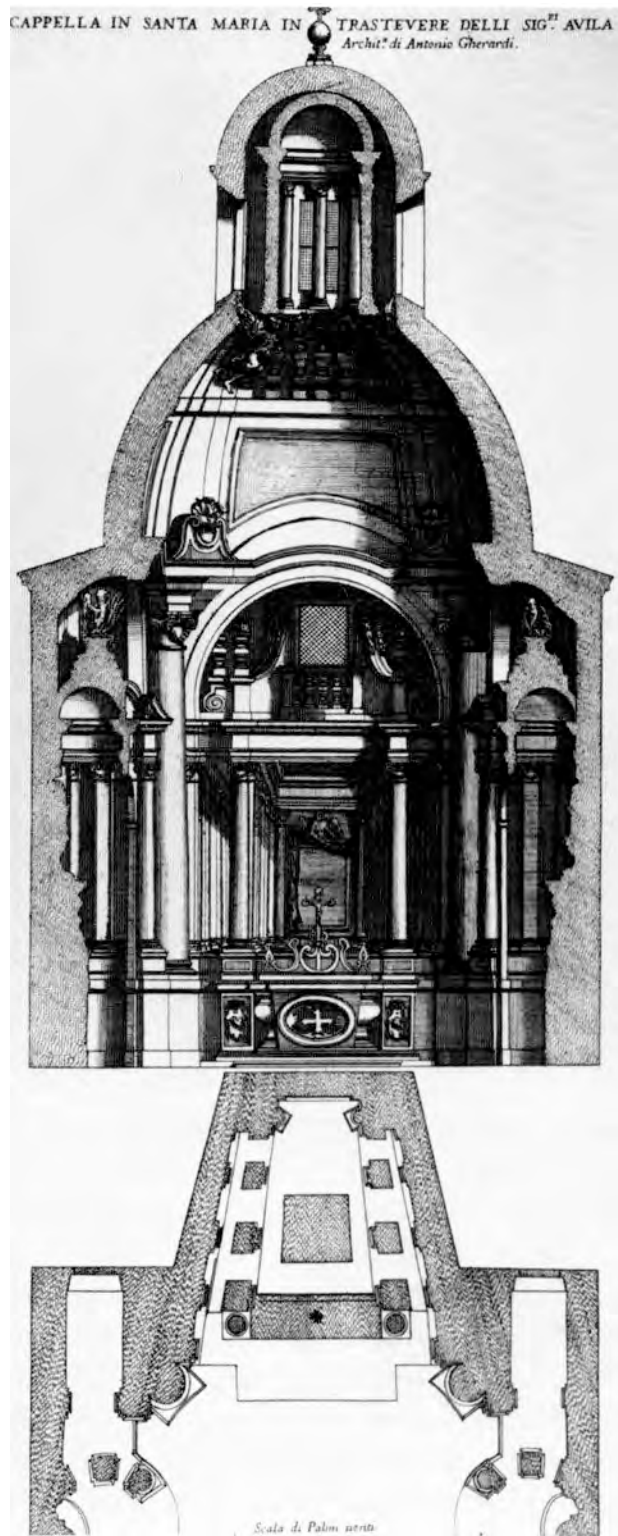


Figure 2.10. Gherardi, Avila Chapel, Santa Maria in Trastevere, Rome, 1678-80, section and plan (De Rossi, *Disegni di vari altari*).

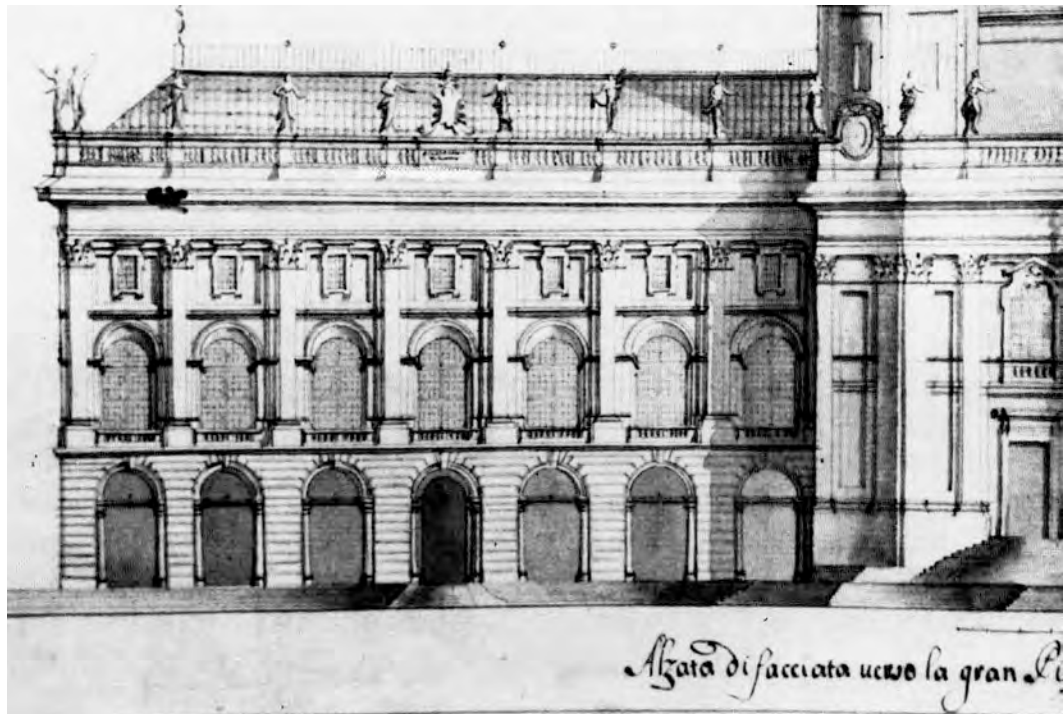


Figure 2.11. Vittone, Project for a City Surrounded by the Sea, 1732, perspectival windows (Rome, Accademia di San Luca).

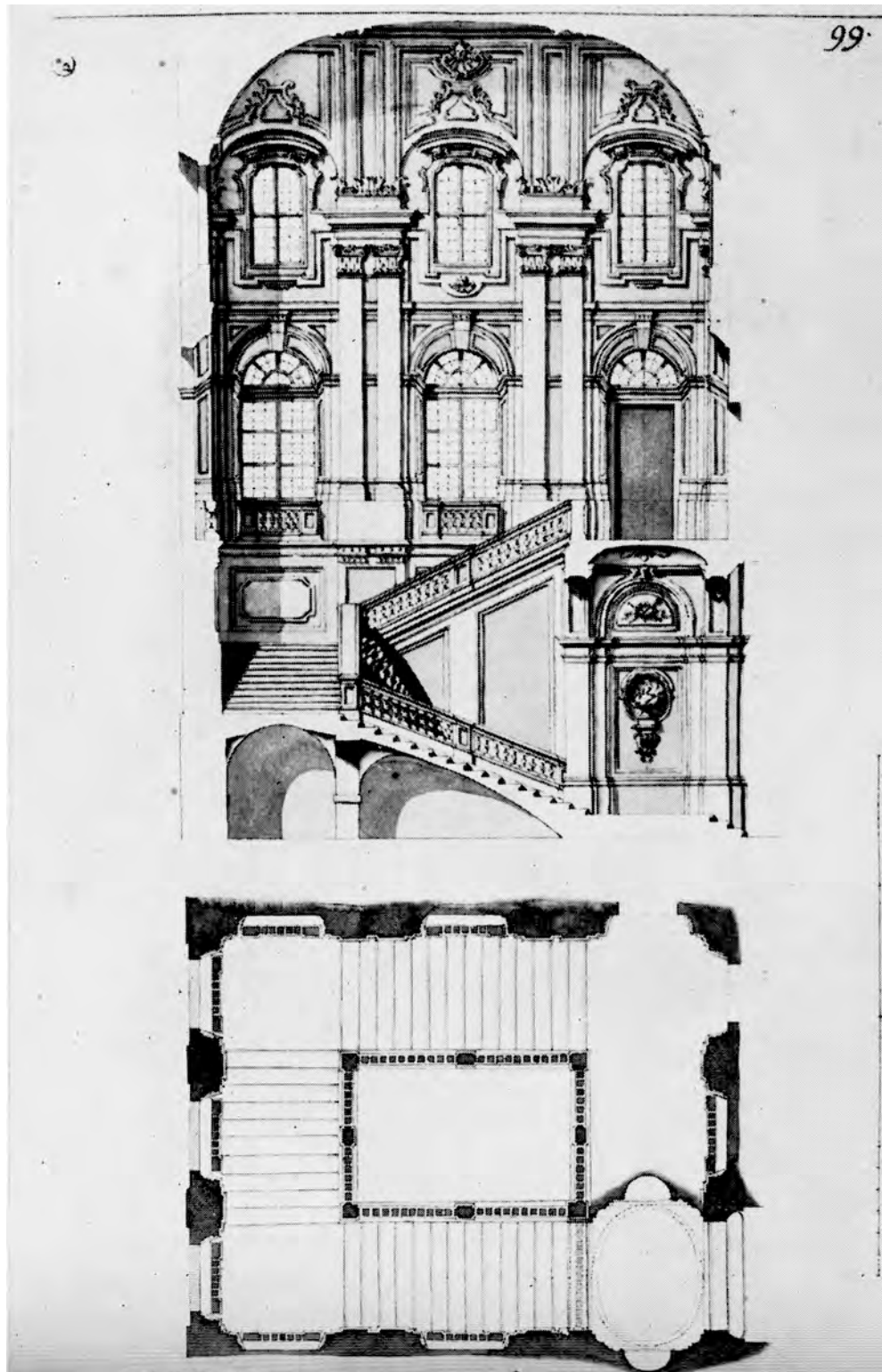


Figure 2.12. Vittone, Project for a Palace Stairwell with perspectival windows, section and plan (*"L'architetto civile,"* pl. 99).



Figure 2.13. Vittone, Collegio delle Provincie, Turin, 1738, courtyard façade with perspectival windows.

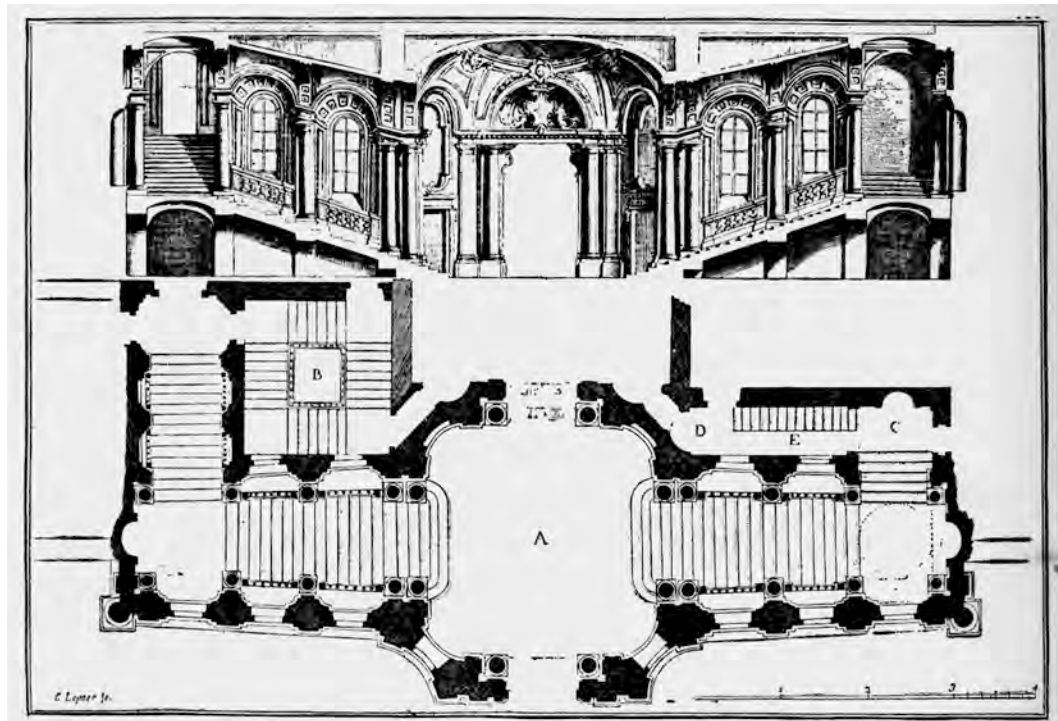


Figure 2.14. Vittone, Project for a Staircase in a Grand Palace (*Istruzioni diverse*, pl. 15).

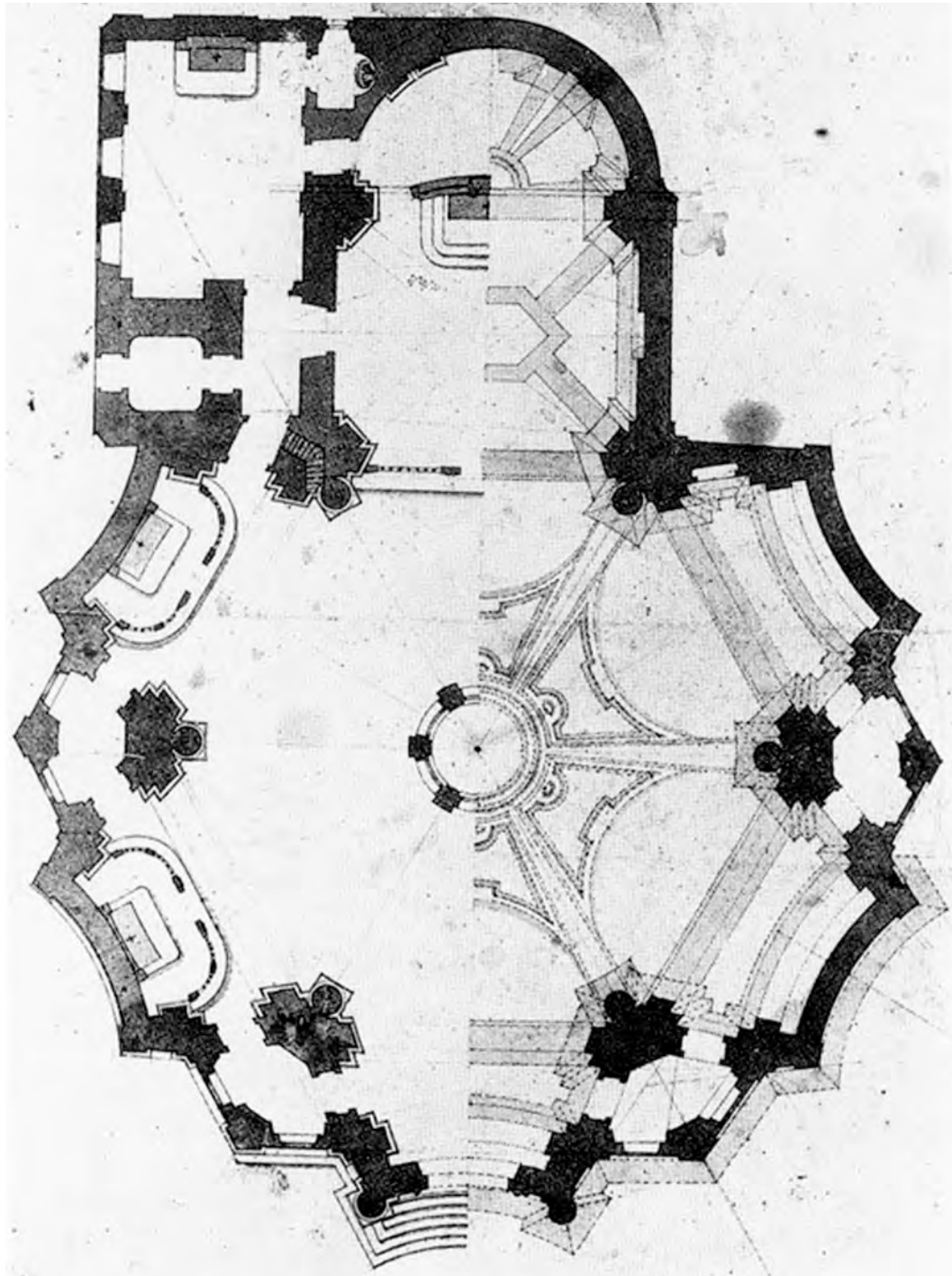


Figure 2.15. Vittone, Santa Maria dell'Assunta, Grignasco, 1750-83, plan (*Istruzioni diverse*, pl. 57 bottom figure).

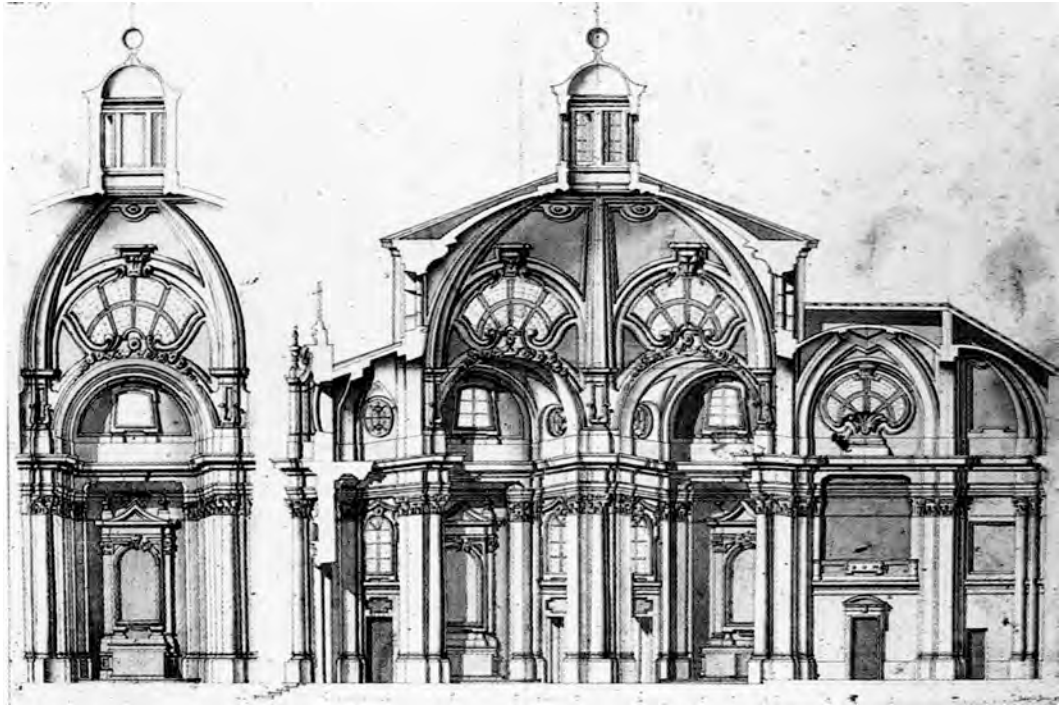




Figure 3.1. Salvi, Palace of Hyman, Fireworks Machine for the Piazza di Spagna, Rome, 1728 (Rome, Museo di Roma).

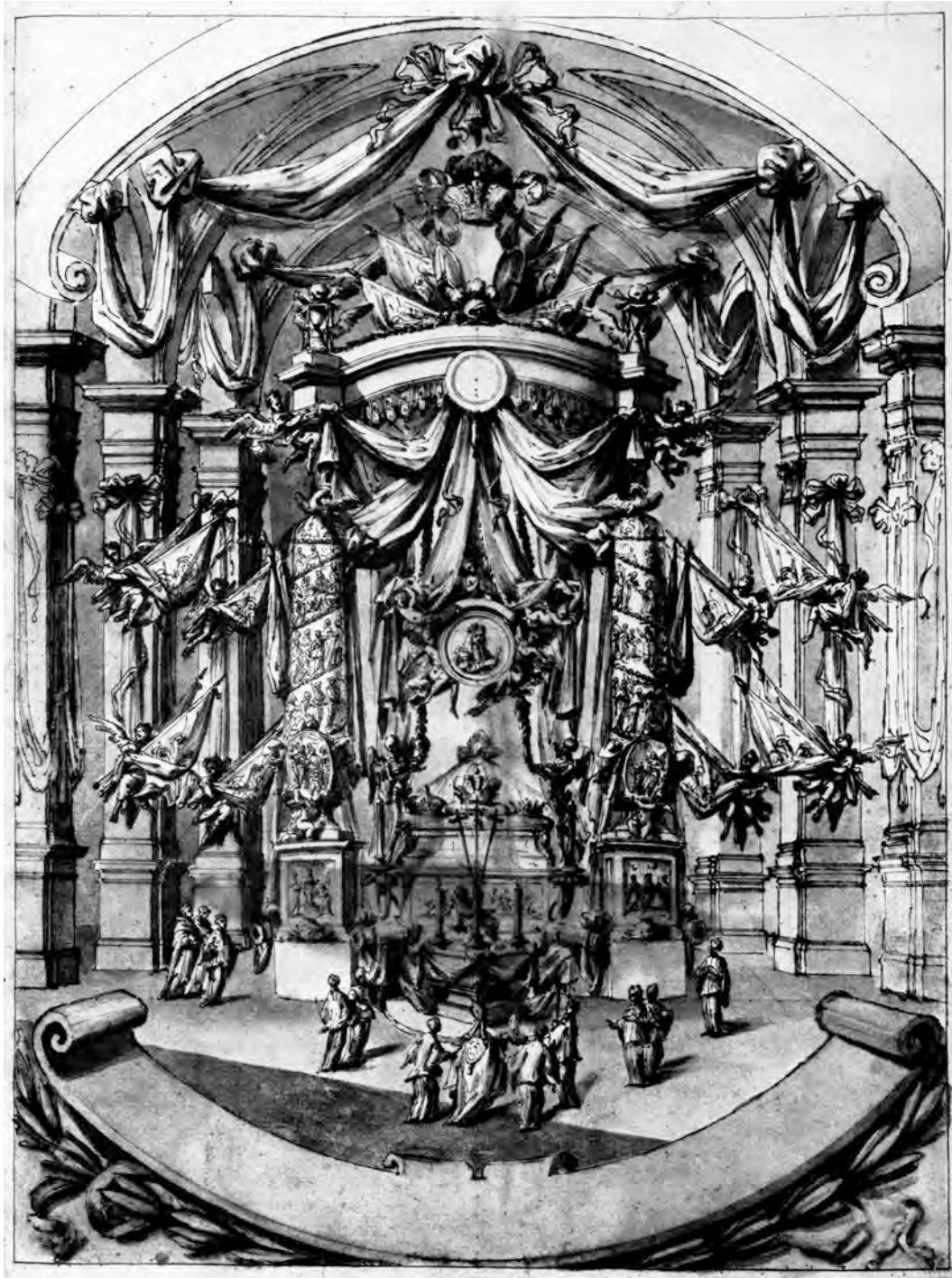


Figure 3.2. Fontana, Catafalque for Leopold I, Santa Maria dell'Anima, Rome, 1705 (London, Victoria and Albert Museum).



Figure 3.3. Fontana, Catafalque for Pedro II, Sant'Antonio dei Portoghesi, Rome, 1707 (Windsor Castle, Royal Library).

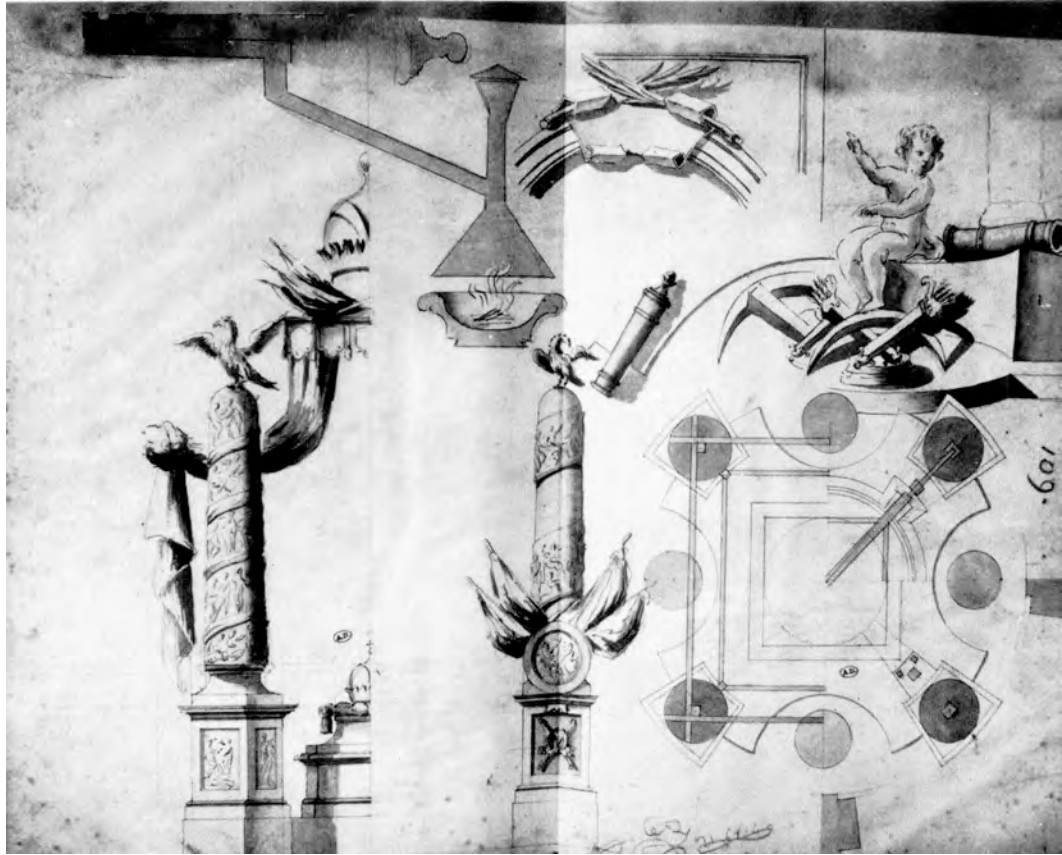


Figure 3.4. Vittone, Sheet of Studies (after Fontana), 1732-33 (Paris, Musée des Arts Décoratifs).



Figure 3.5. Vittone, Catafalque for Pedro II (after Fontana), 1732-33 (Paris, Musée des Arts Décoratifs).



Figure 3.6. Vittone, Catafalque for Pedro II (after Fontana), 1766 (*Istruzioni diverse*, pl. 103, right figure).

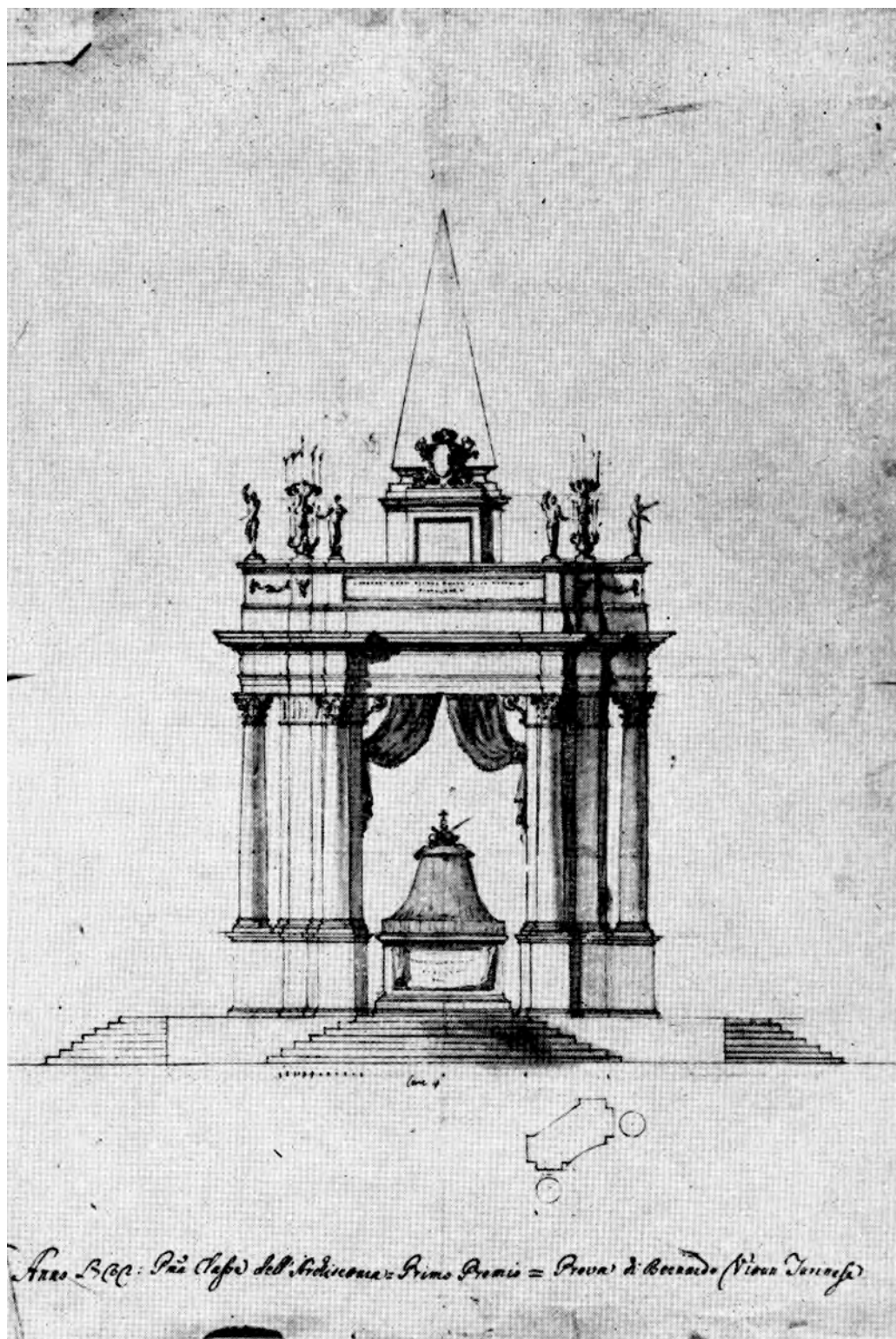


Figure 3.7. Vittone, Catafalque for a Potentate (Rome, Accademia di San Luca).



Figure 3.8. Fischer von Erlach, Reconstruction of the Mausoleum of Halicarnassus (*Historischen Architektur*, I, pl. 6).



Figure 3.9. Juvarra, Ideal Reconstruction of Ancient Monuments (Vienna, Albertina).



Figure 3.10. Galli Bibiena, Reconstruction of an Ancient Forum
(Architetture e prospettive, II-7).

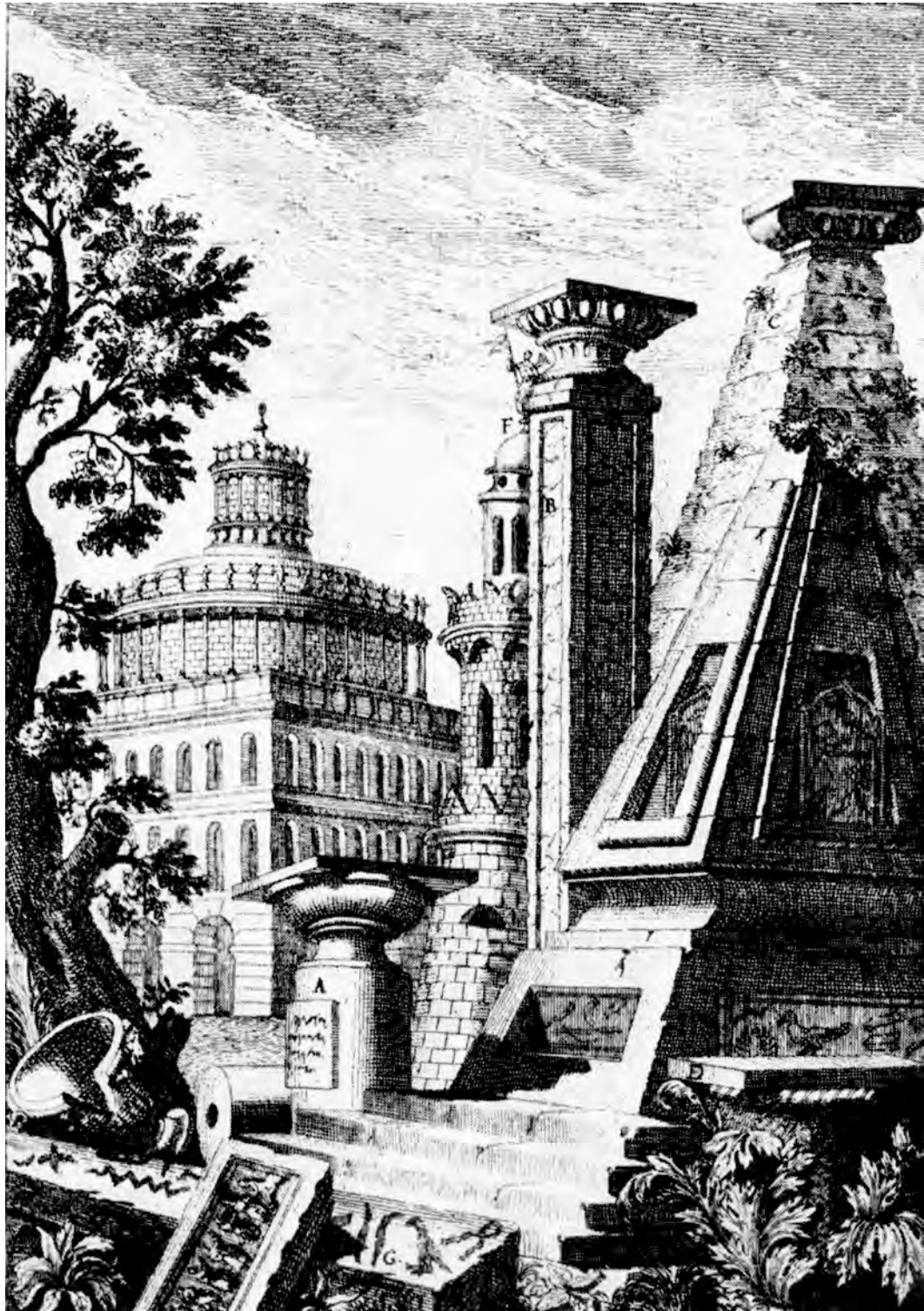


Figure 3.11. Vittone, Architectural Caprice of a Cemetery (*Istruzioni elementari*, pl. 9).

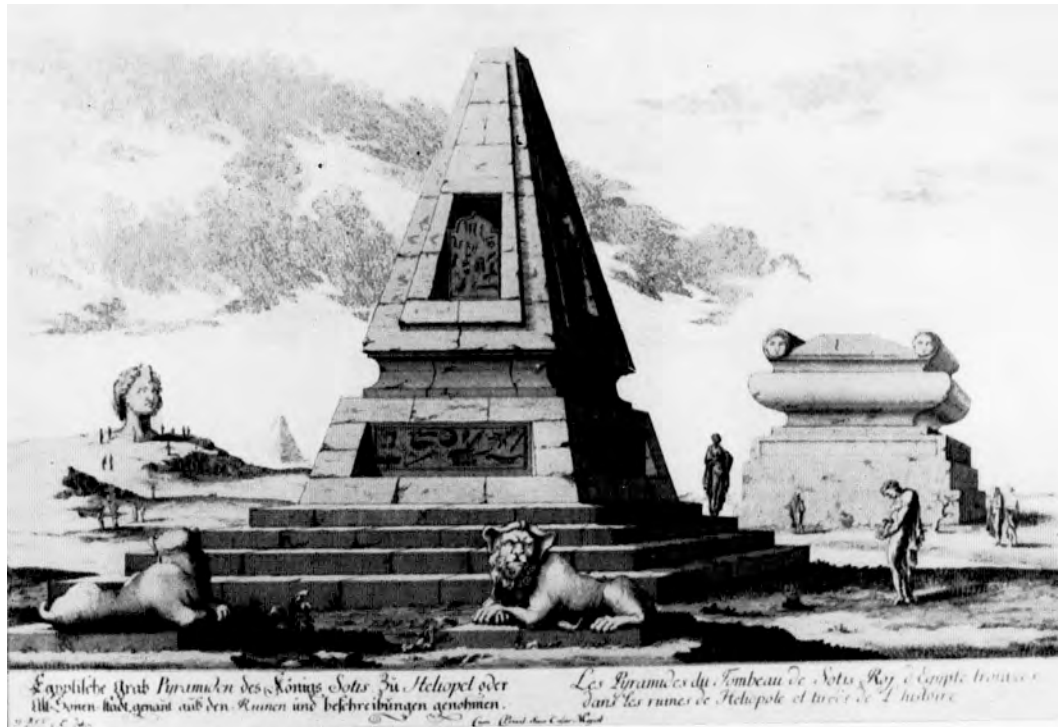


Figure 3.12. Fischer von Erlach, Egyptian Pyramids and Tombs at Heliopolis (*Historischen Architektur*, I, pl. 14).

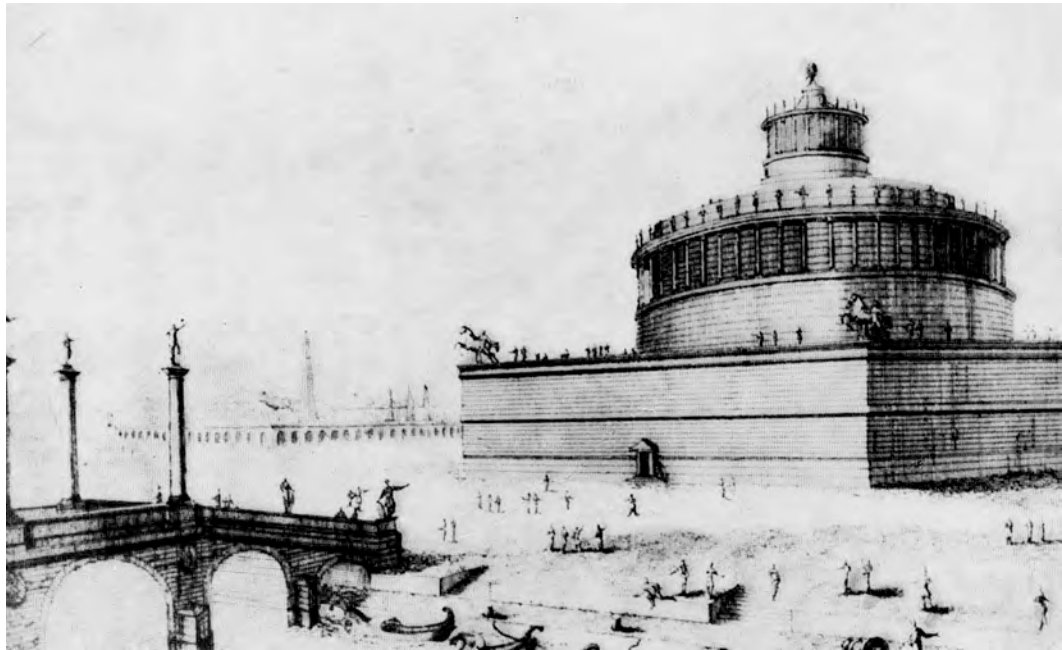


Figure 3.13. Fischer von Erlach, Reconstruction of Hadrian's Mausoleum (*Historischen Architektur*, II, pl. 8).

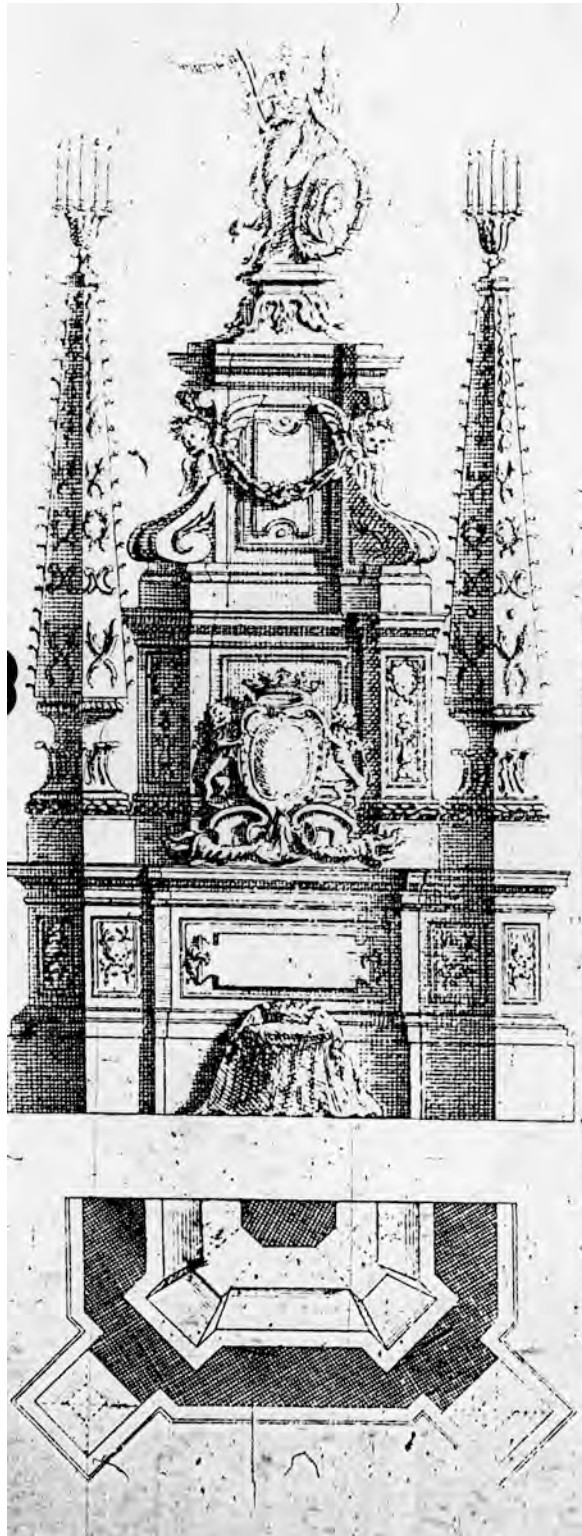


Figure 3.14. Vittone, Design for a Catafalque (*Istruzioni diverse*, pl. 103, left figure).



Figure 3.15. Vittone, Design for a Catafalque (*Istruzioni diverse*, pl. 103, center figure).



Figure 3.16. Vittone, Temporary Festival Decoration, Jewish Ghetto, Turin, 1737.



Figure 3.17. Vittone, Project for a Fireworks Machine (*Istruzioni diverse*, pl. 36).

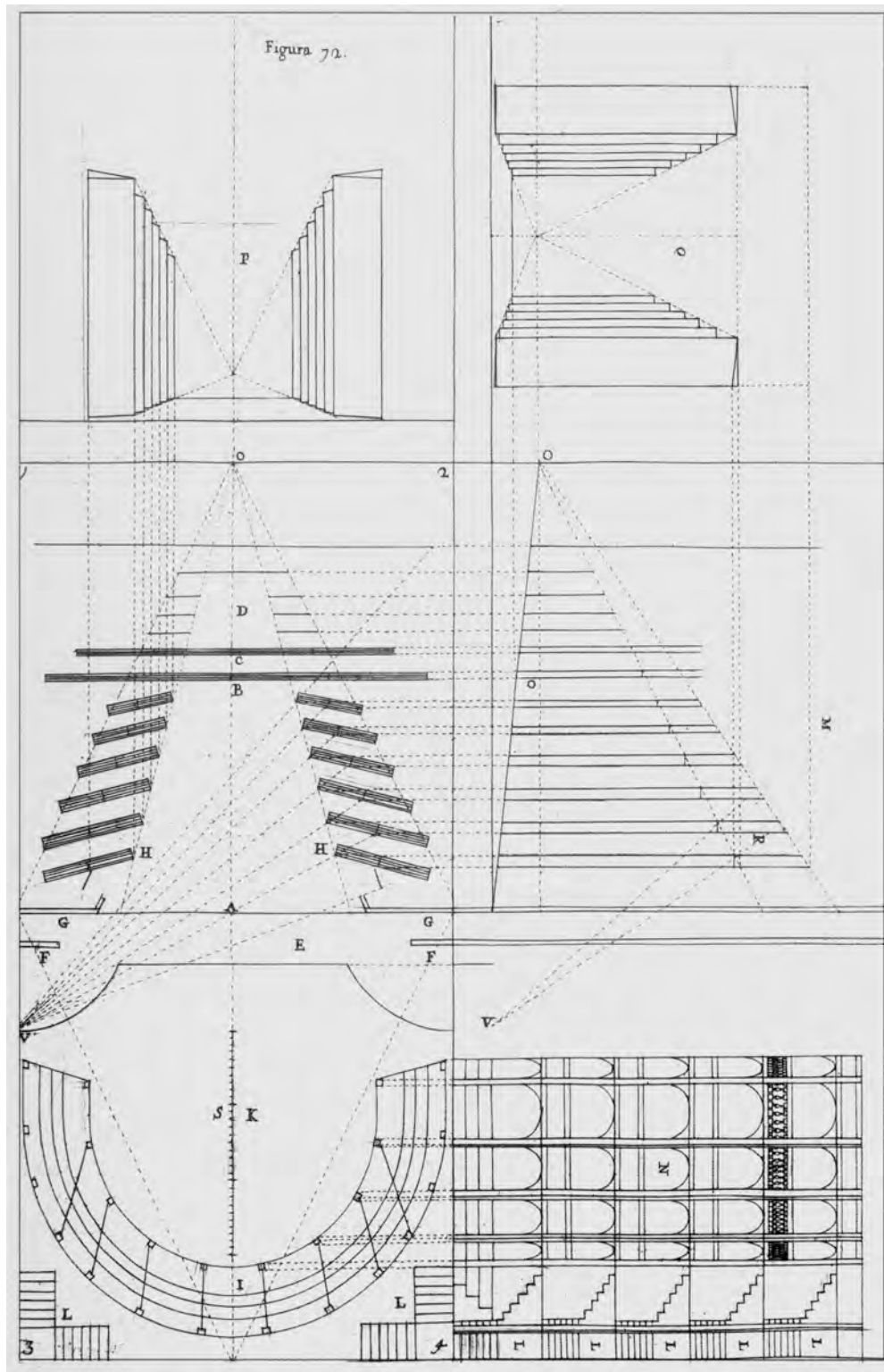


Figure 3.18. Pozzo, Stage Set and Auditorium (*Perspectiva Pictorum*, I, fig. 72).

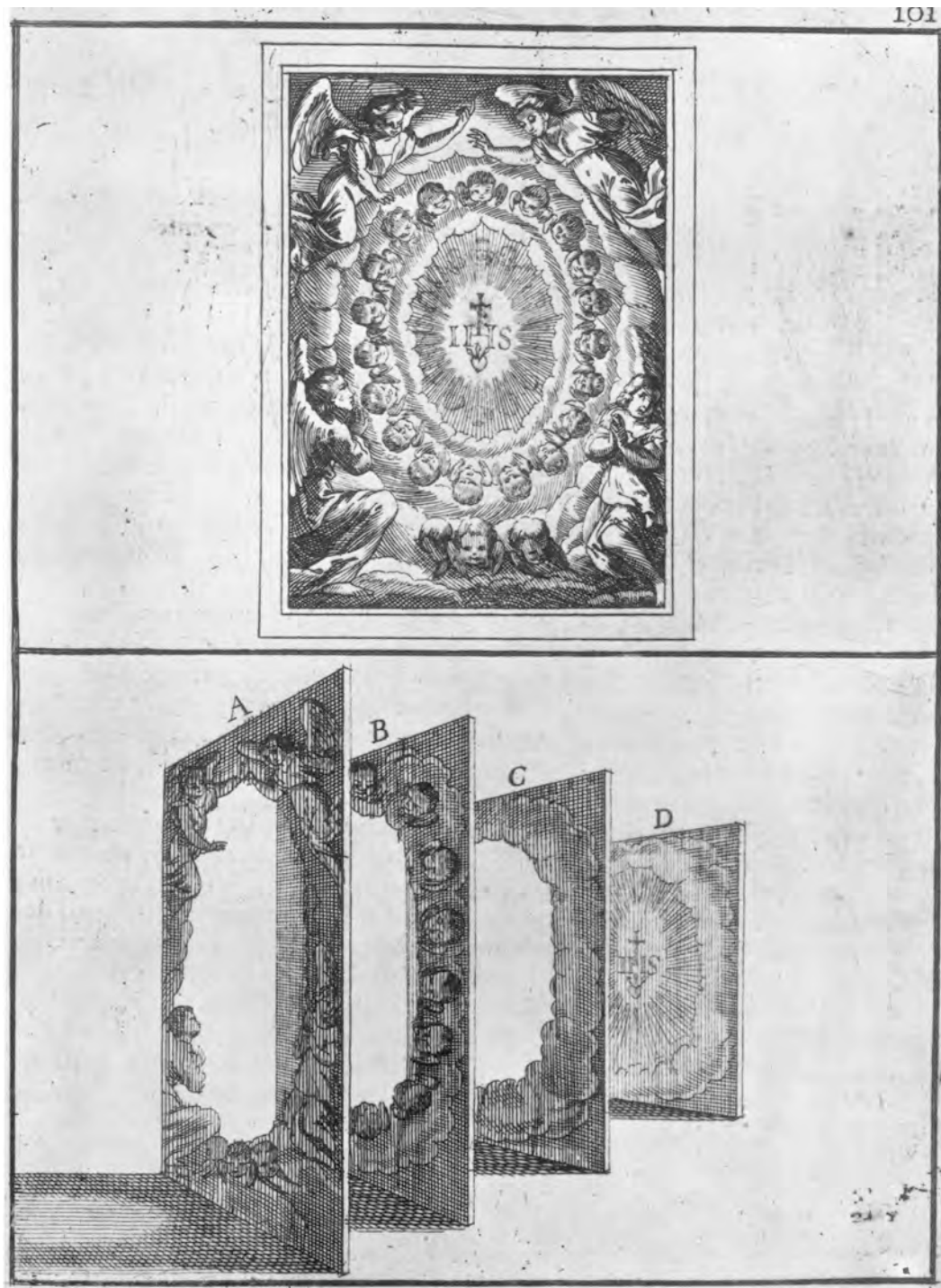


Figure 3.19. Dubreuil, Scenic Altar Arrangement (*La perspective pratique*, III, p. 101).



Figure 3.20. Pozzo, "Marriage Feast at Cana," *Apparato* for the *Quarant'ore* Devotion, Gesù, Rome, 1685 (*Perspectiva Pictorum*, I, fig. 71).



Figure 3.21. Pozzo, "Sitientes venite ad aquas," *Apparato* for the Quarant'ore Devotion, Gesù, Rome, 1695 (*Perspectiva Pictorum*, II, fig. 47).



Figure 3.22. Pozzo, "Miraculous Cure of the Paralytic," Alternate Apparato for the Quarant'ore Devotion, Gesù, Rome, 1695 (*Perspectiva Pictorum*, II, fig. 48).



Figure 3.23. Vittone, Architectural Caprice (after Juvarra) (Paris, Musée des Arts Décoratifs).



Figure 3.24. Juvarra, Scenographic Project for *Giunio Bruto overo La Caduta de' Tarquinii* (Vienna, Nationalbibliothek).

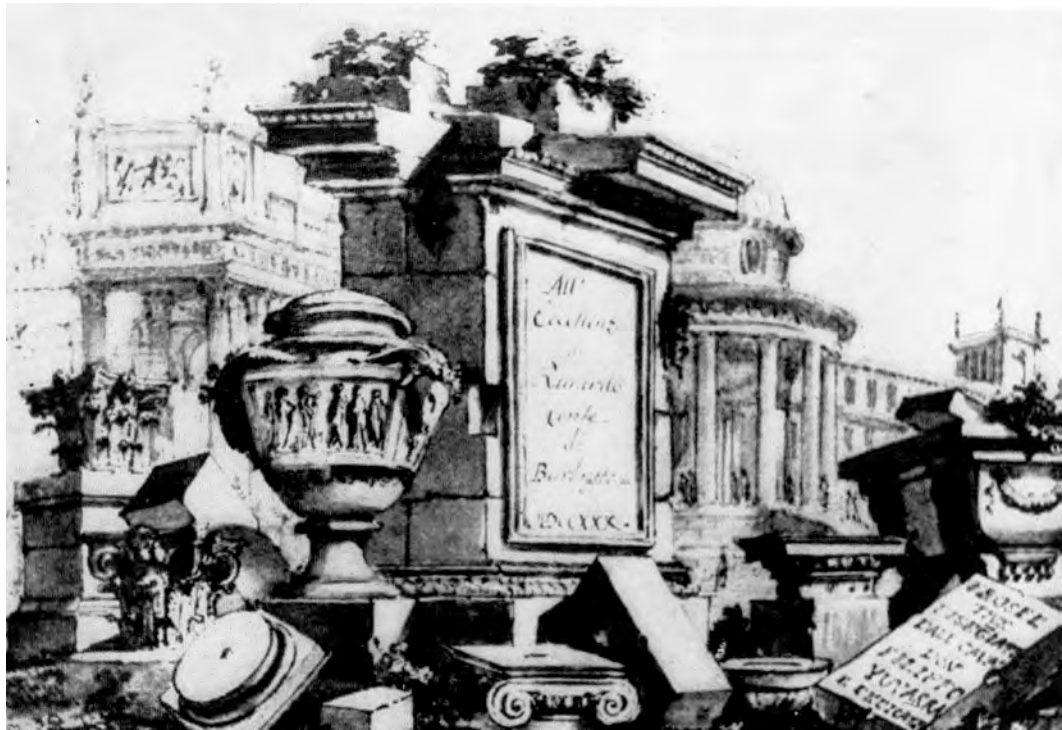


Figure 3.25. Juvarra, *Ancient Ruins*, Frontispiece of the Volume of Drawings Dedicated to Lord Burlington (Chatsworth).

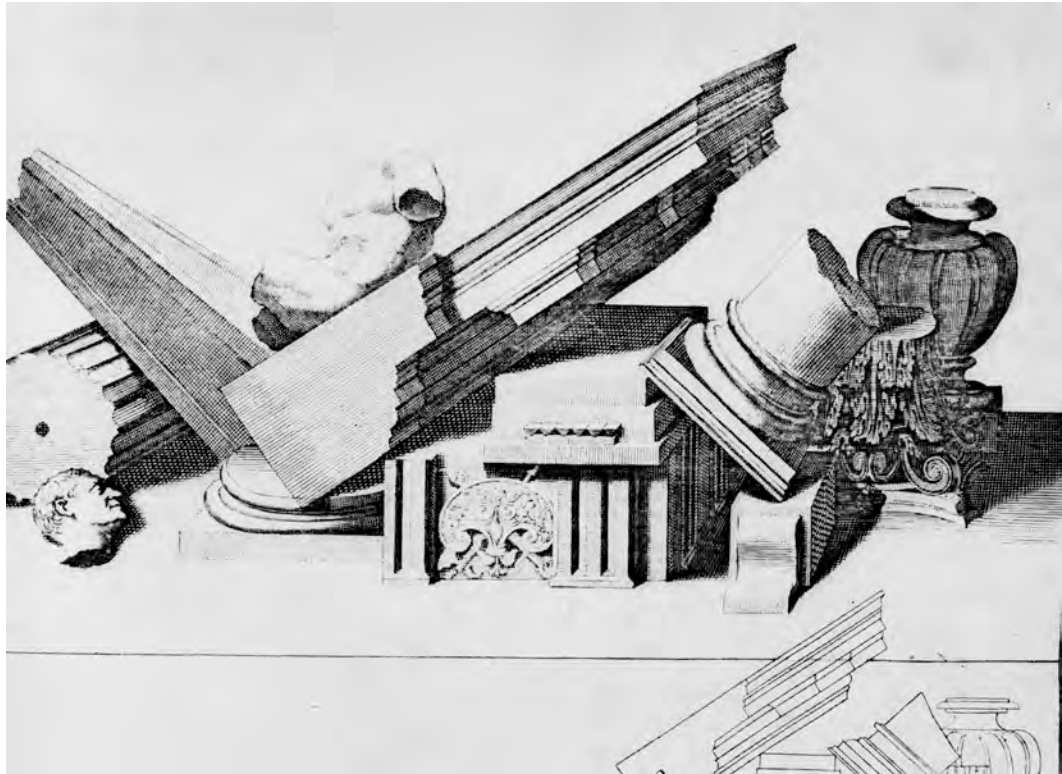


Figure 3.26. Pozzo, Geometric Exercise with Ancient Ruins (*Perspectiva Pictorum*, II, fig. 36).



Figure 3.27. Galli Bibiena, Reconstruction of an Ancient Forum
(*Architetture e prospettive*, III-10).

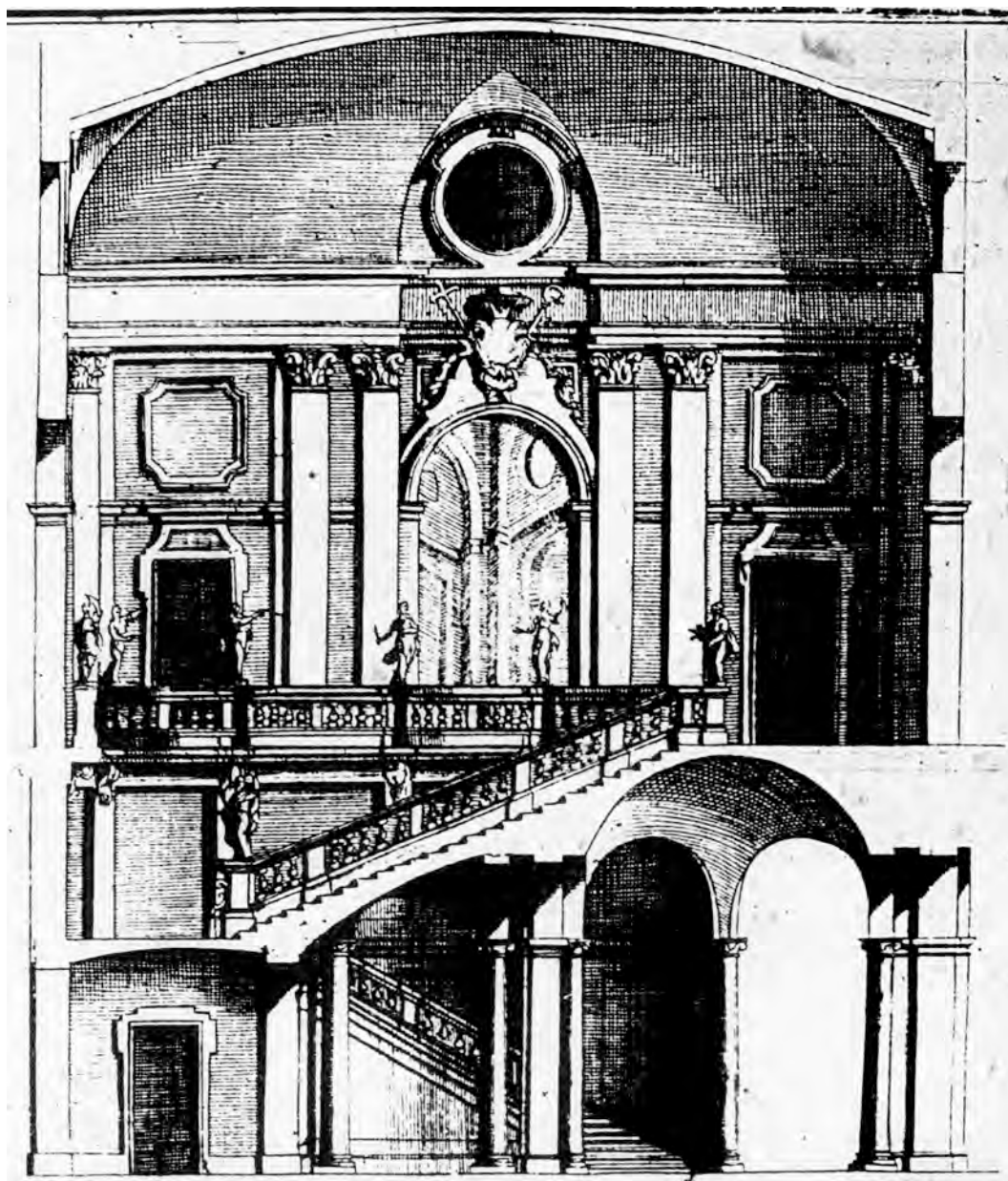


Figure 3.28. Vittone, Staircase with a Depiction of a *scena per angolo*, section (*Istruzioni diverse*, pl. 18).

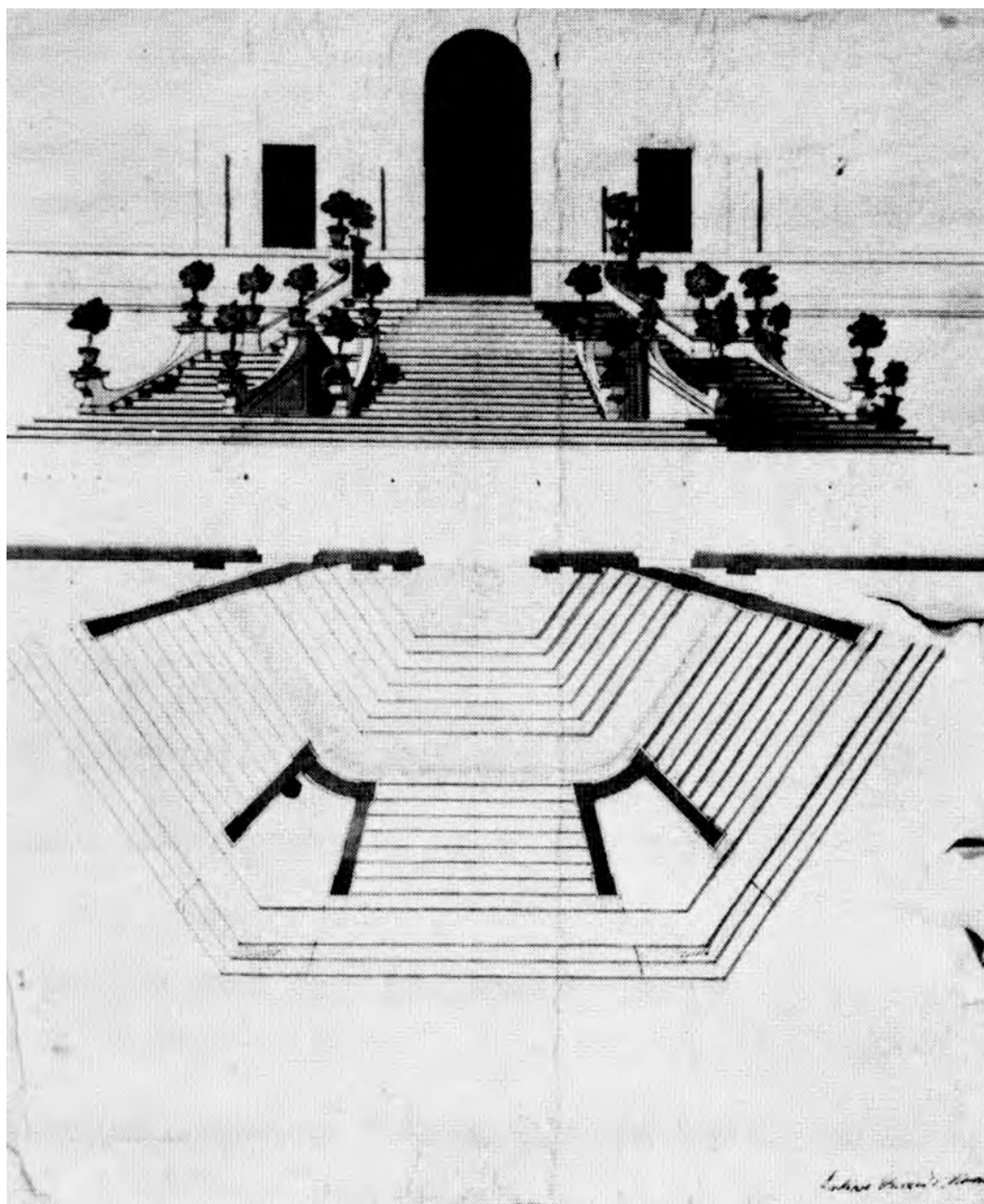


Figure 3.29. Vittone, Entry Stairs to Villa Morra di Lavriano, Villastellone, *ca.* 1733, plan and elevation.

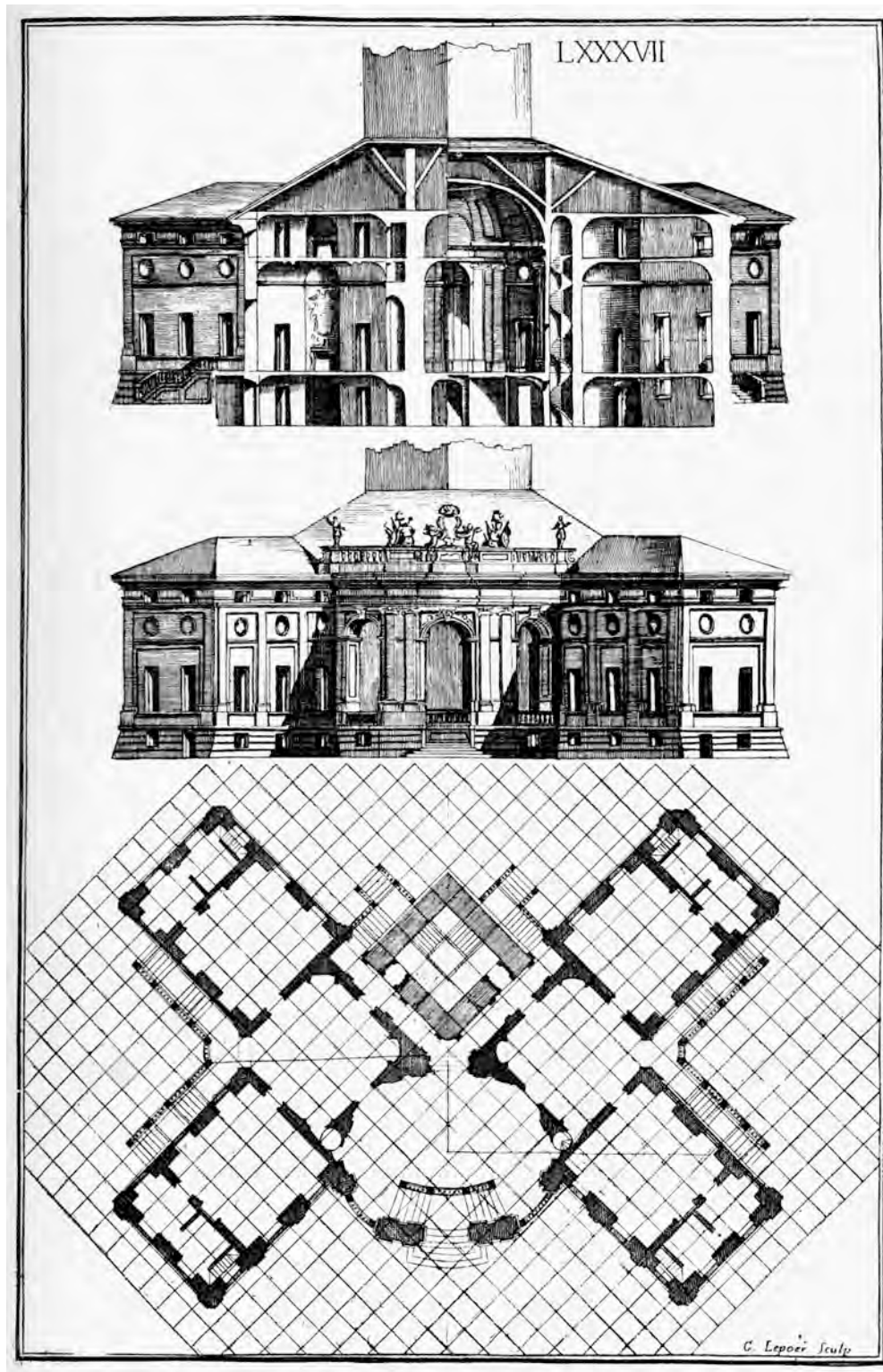


Figure 3.30. Vittone, Project for a Villa at Santa Vittoria d'Alba, section, elevation and plan (*Istruzioni diverse*, pl. 87).

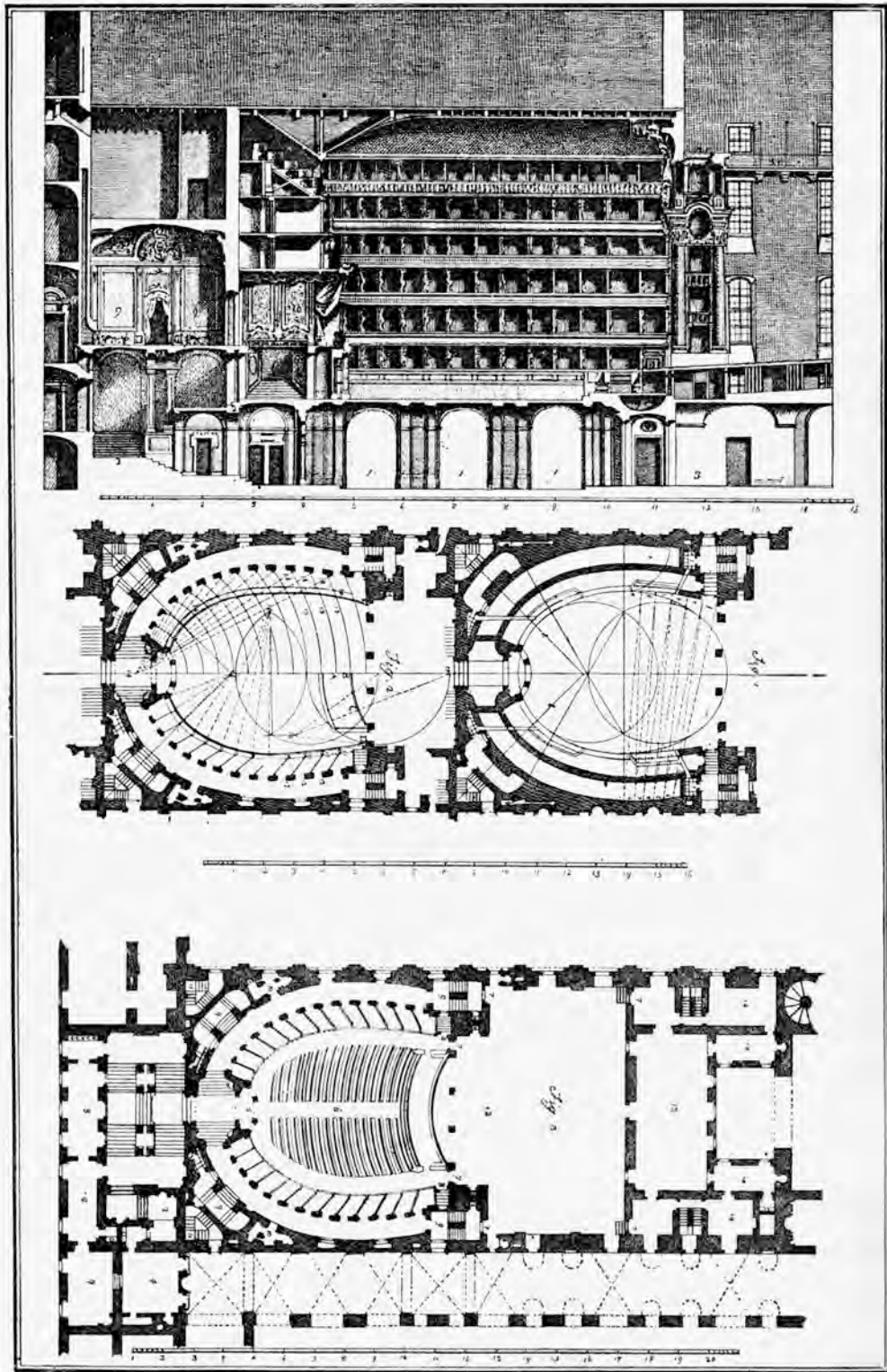


Figure 3.31. Vittone, Theater (after Alfieri), section and plans (*Istruzioni diverse*, pl. 110).

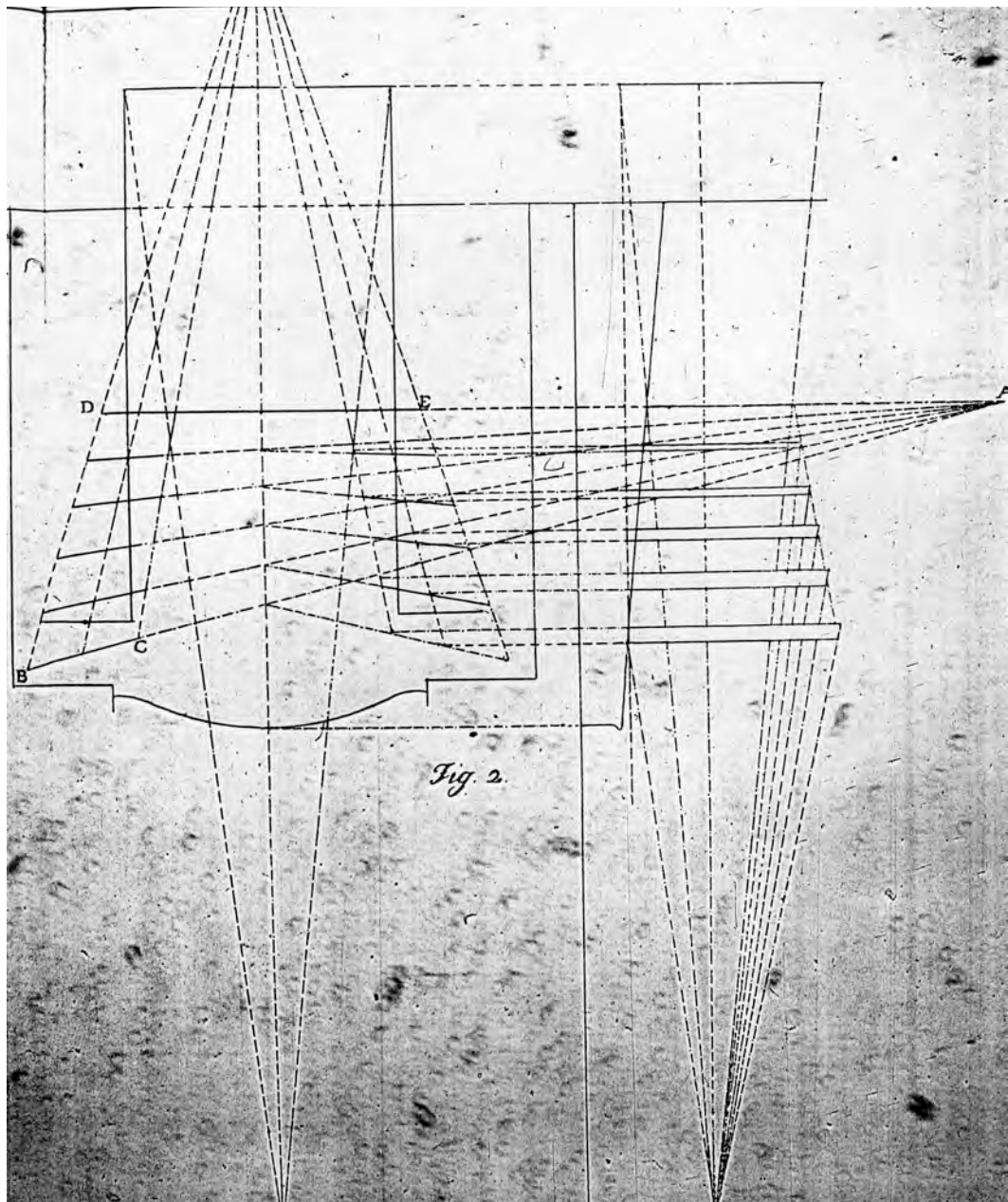


Figure 3.32. Vittone, Stagesets, plan (*Istruzioni diverse*, pl. 108, right figure).

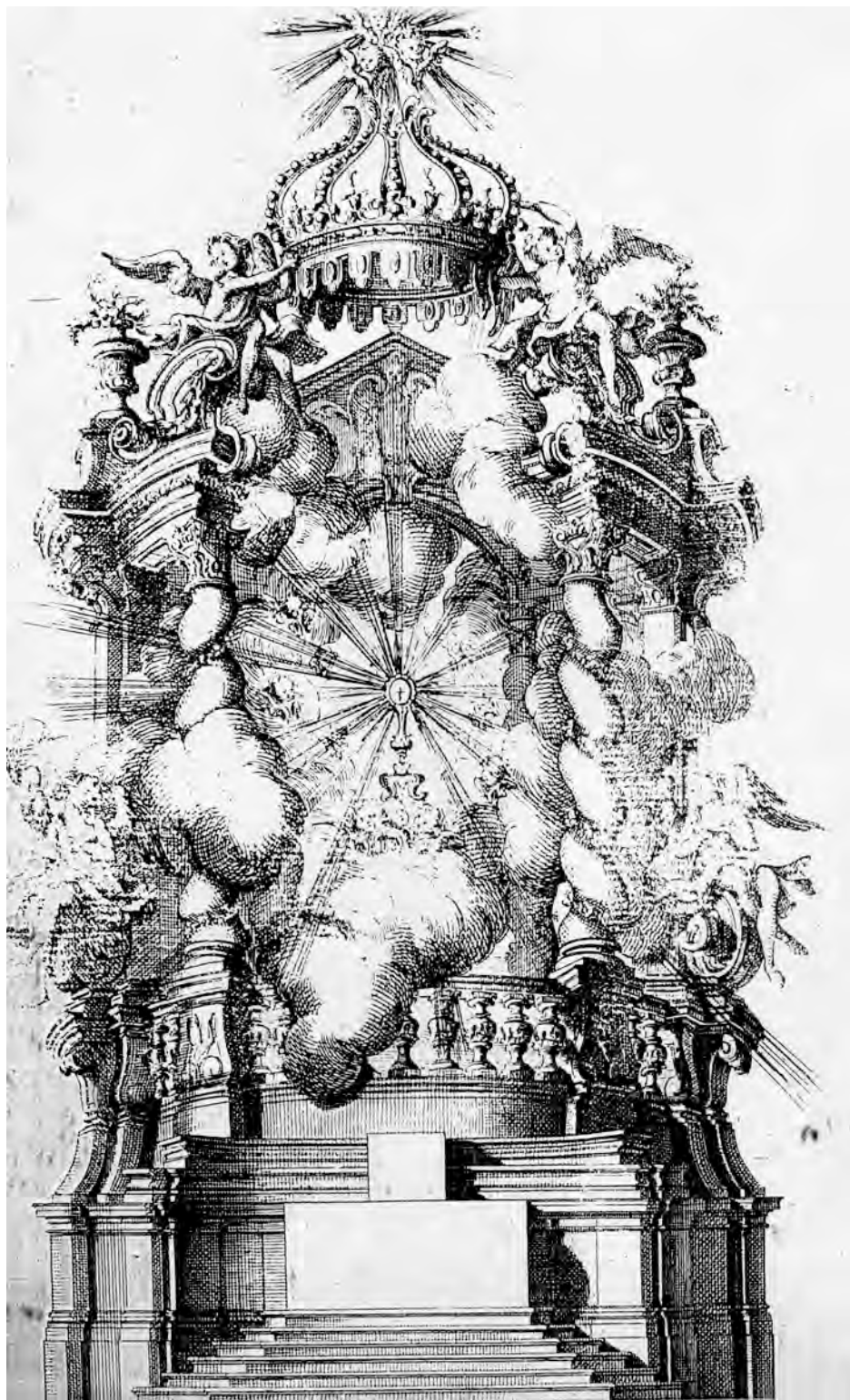


Figure 3.33. Vittone, *Apparato* for the *Quarant'ore* Devotion (*Istruzioni diverse*, pl. 98).



Figure 3.34. Vittone, *Apparato for the Quarant'ore Devotion, Santi Martiri*, Turin, 1737 (*Istruzioni diverse*, pl. 99).



Figure 3.35. Gherardi, Avila Chapel, Santa Maria in Trastevere, Rome, 1678-80, dome.



Figure 3.36. Gherardi, Santa Cecilia Chapel, San Carlo ai Catinari, Rome, 1691-99, dome.

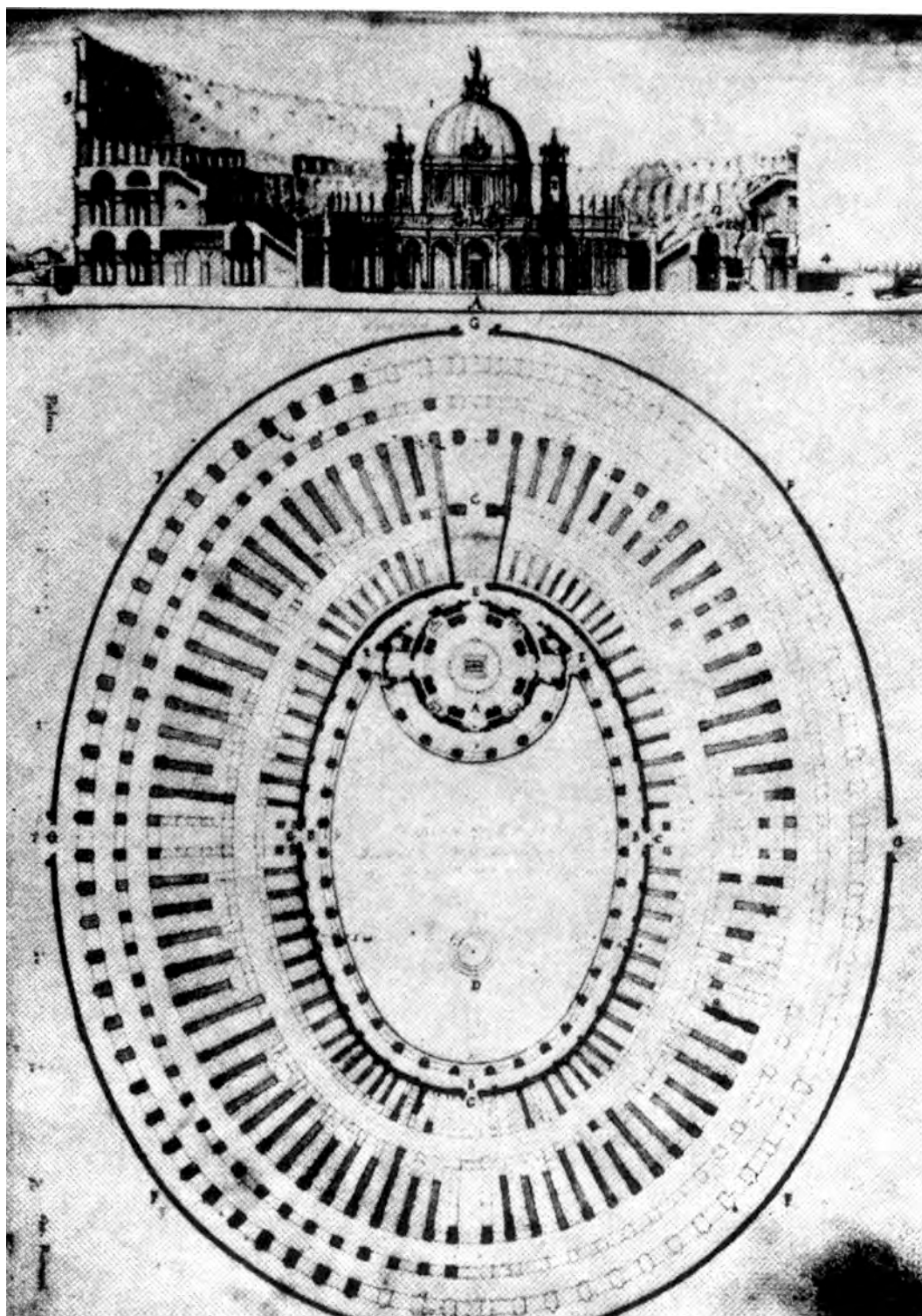


Figure 3.37. Fontana, Project for a Martyrial Church in the Colosseum, Rome, 1676-79, plan and section (*L'Anfiteatro Flavio*).



Figure 3.38. Fontana, Project for a Martyrial Church in the Colosseum, Rome, 1676-79, elevation (*L'Anfiteatro Flavio*).



Figure 3.39. Juvarra, Palazzo Birago di Borgaro, Turin, 1716, court of honor.

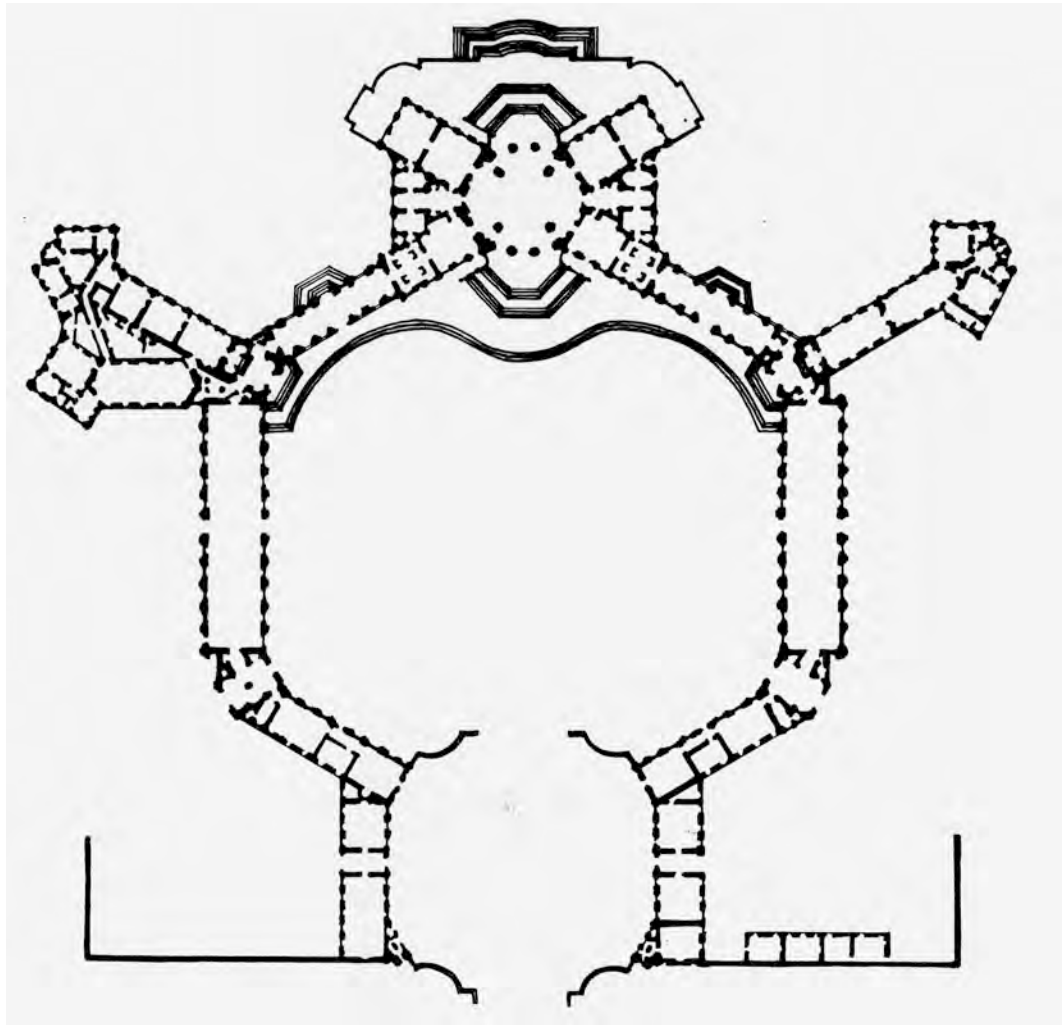


Figure 3.40. Juvarra, Palazzina, Stupinigi, 1729-35, plan.

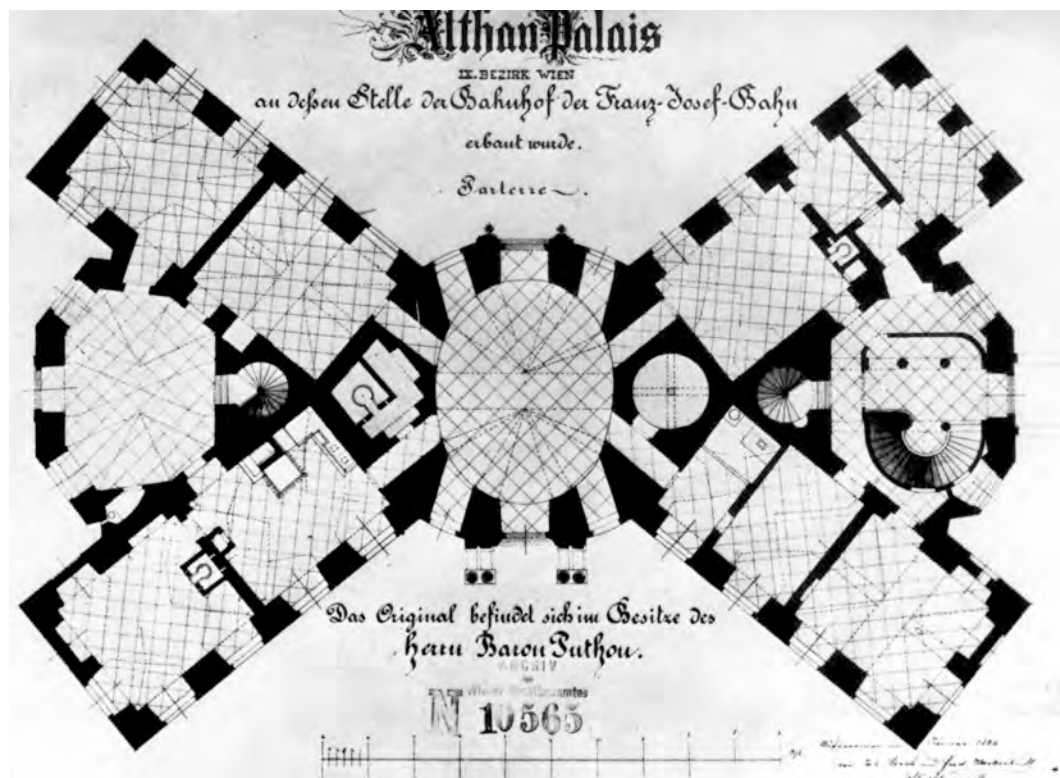


Figure 3.41. Fischer von Erlach, Palace for Count Althan, 1688-92, ground floor plan (Vienna, Historisches Museum der Stadt Wien).

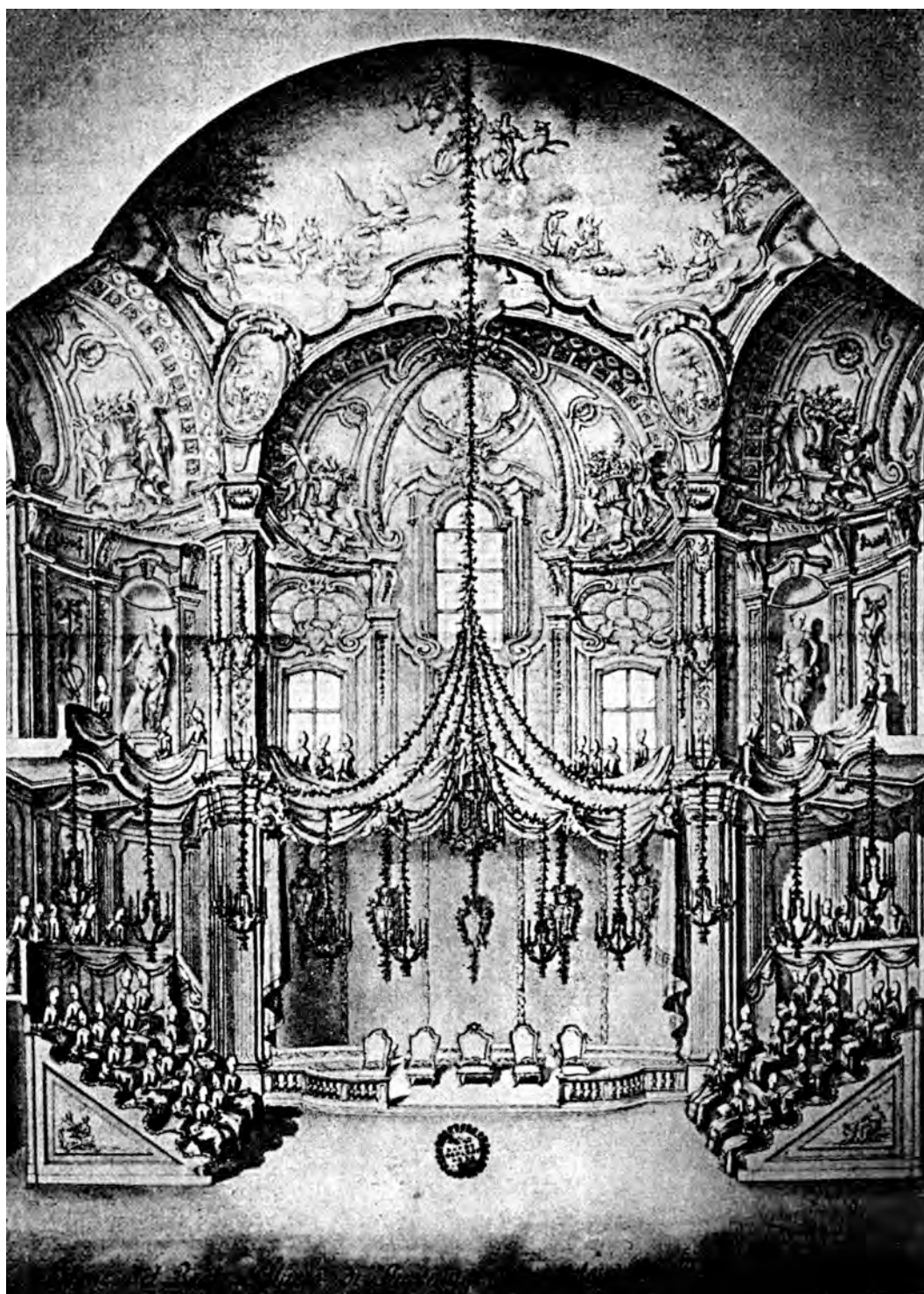


Figure 3.42. Juvarra, Palazzina, Stupinigi, 1729-35, *salone* apparatus for a ball (Turin, Archivio di Stato).

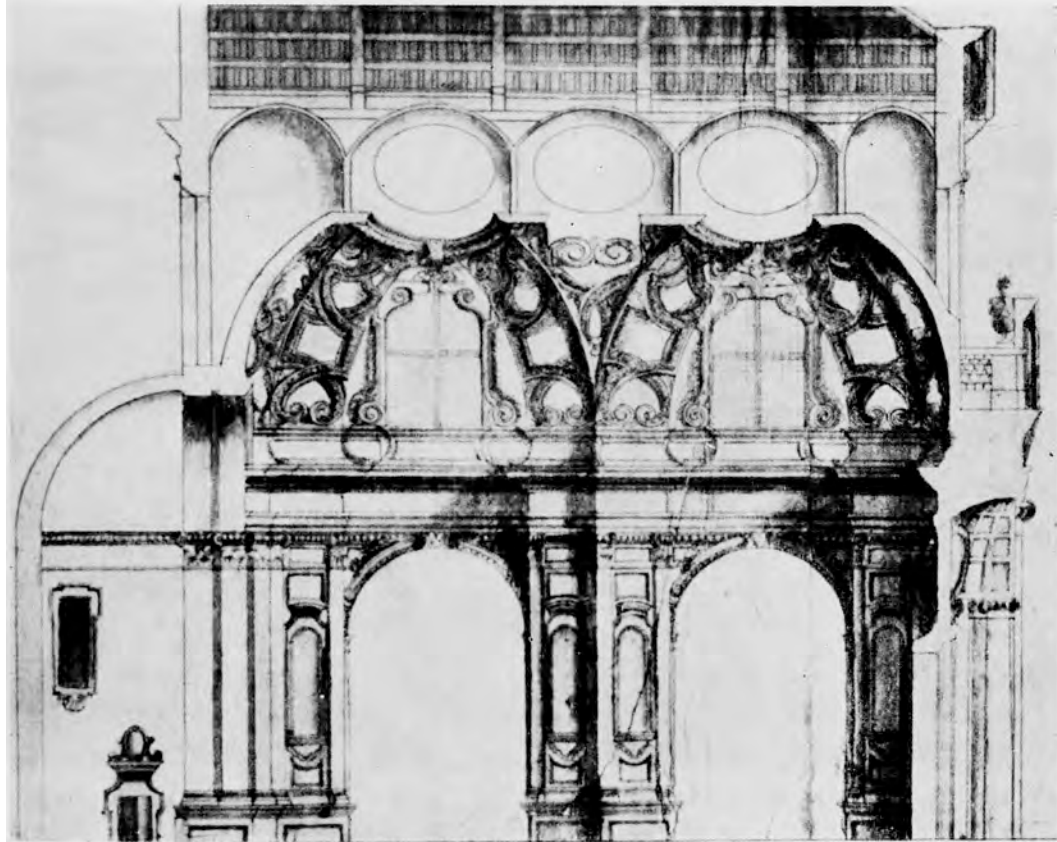


Figure 3.43. Galli Bibiena, Sant'Antonio Abate, Parma, 1712-60, longitudinal section.



Figure 3.44. Galli Bibiena, Sant'Antonio Abate, Parma, 1712-60, vault.

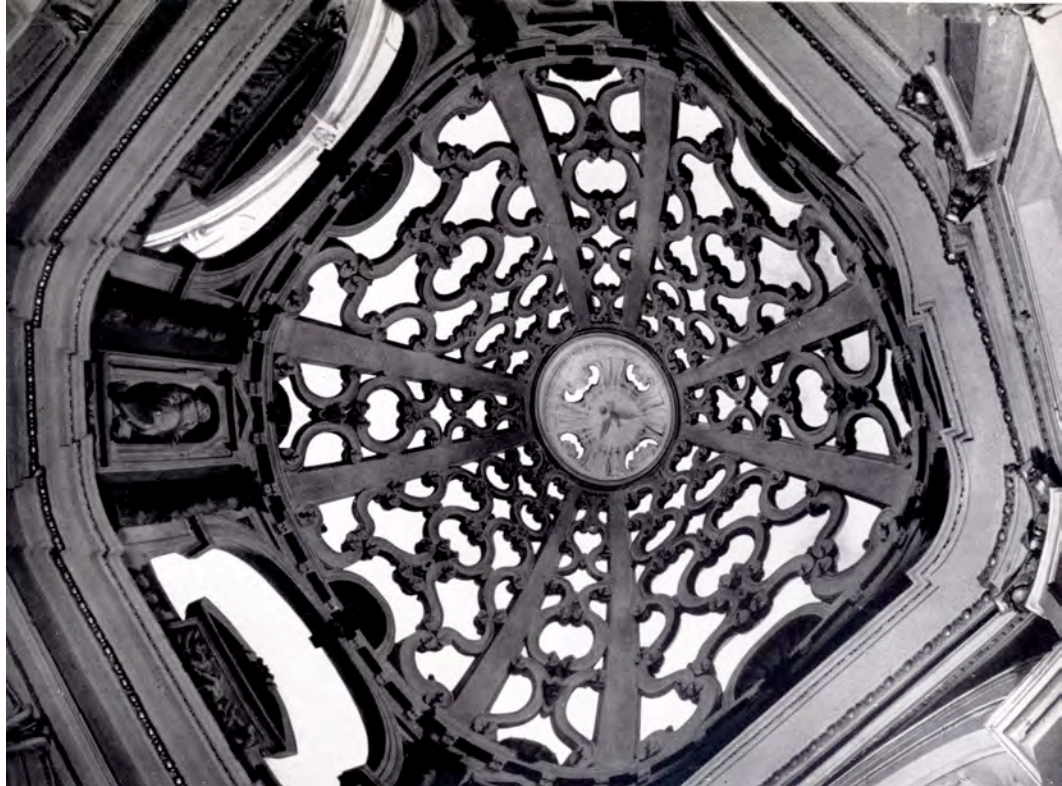


Figure 3.45. Galli Bibiena, Chapel of the Santissimo Sacramento, Santa Maria dell'Assunta, Sabbioneta, 1768, dome.



Figure 3.46. Galli Bibiena, Sant'Antonio Abate, Villa Pasquali, 1765-84, dome.

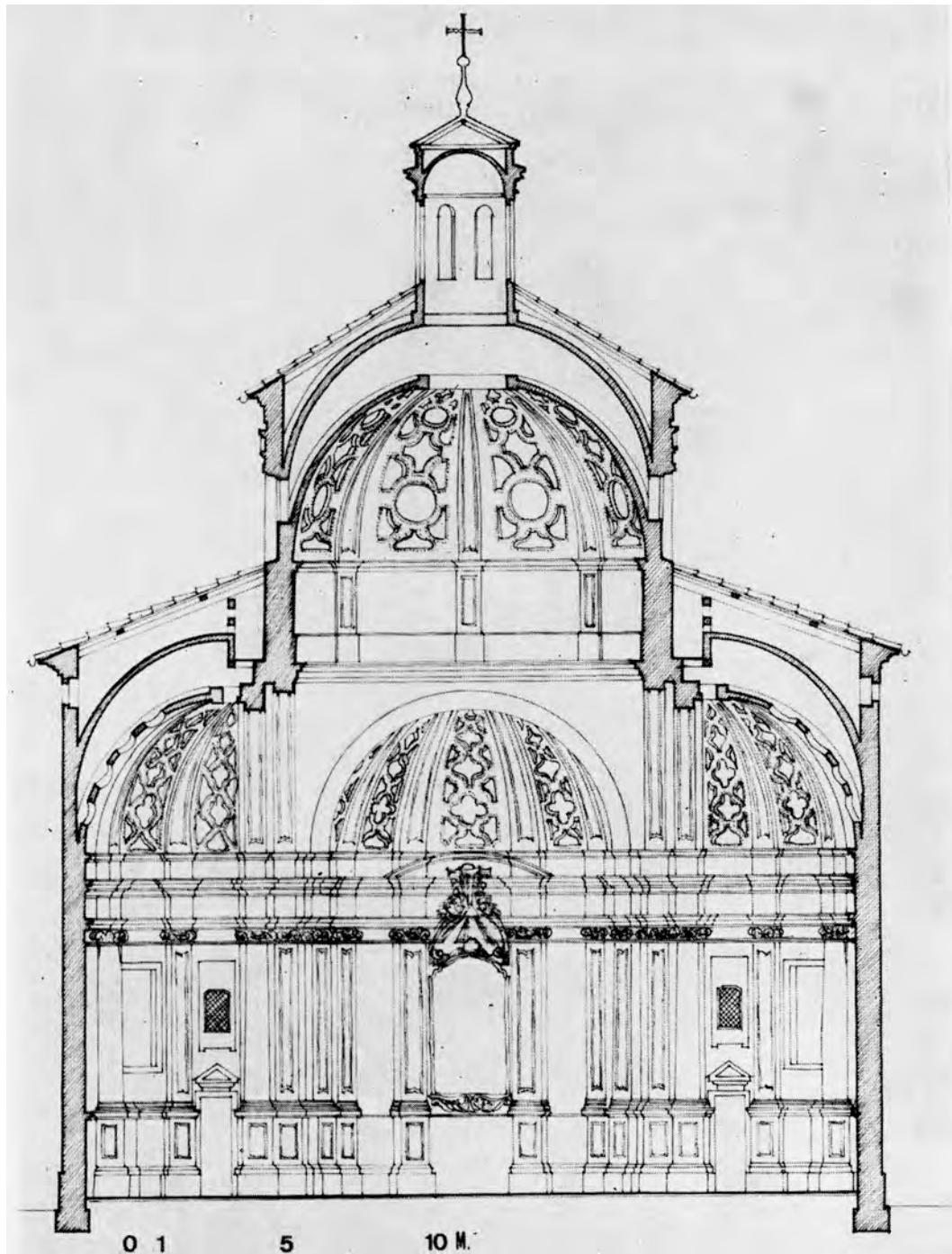


Figure 3.47. Galli Bibiena, Sant'Antonio Abate, Villa Pasquali, 1765-84, section.



Figure 3.48. Vittone, Project for a Fountain in a Large Piazza (*Istruzioni diverse*, pl. 35).

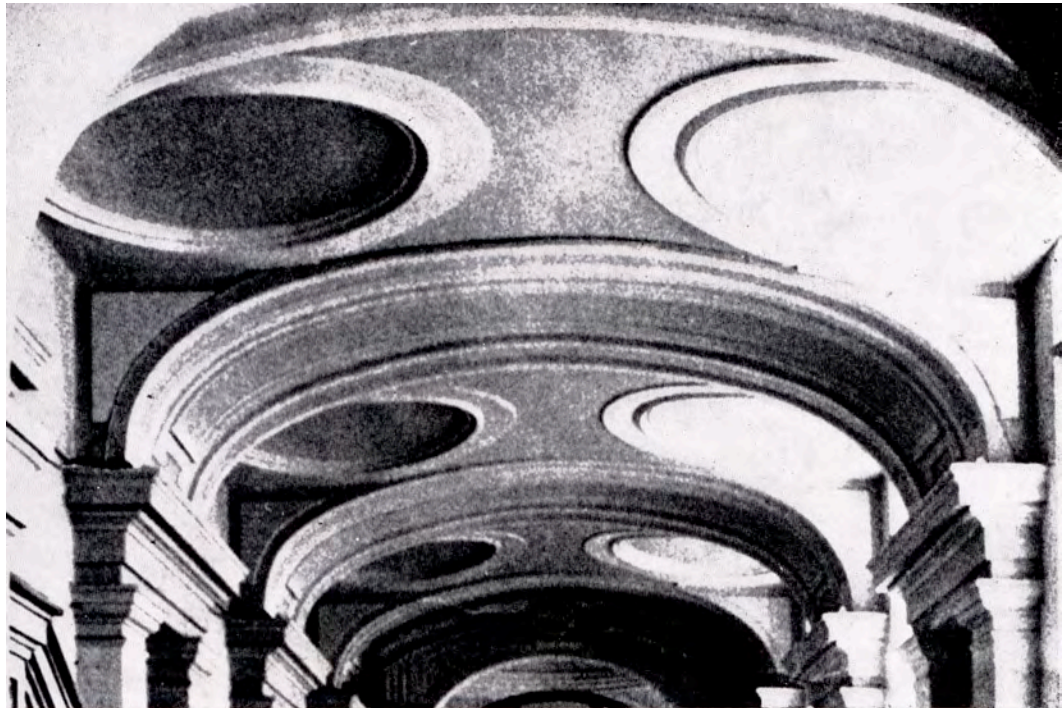


Figure 3.49. Vittone, Collegio dei Gesuiti, Turin, 1769, corridor ceiling.

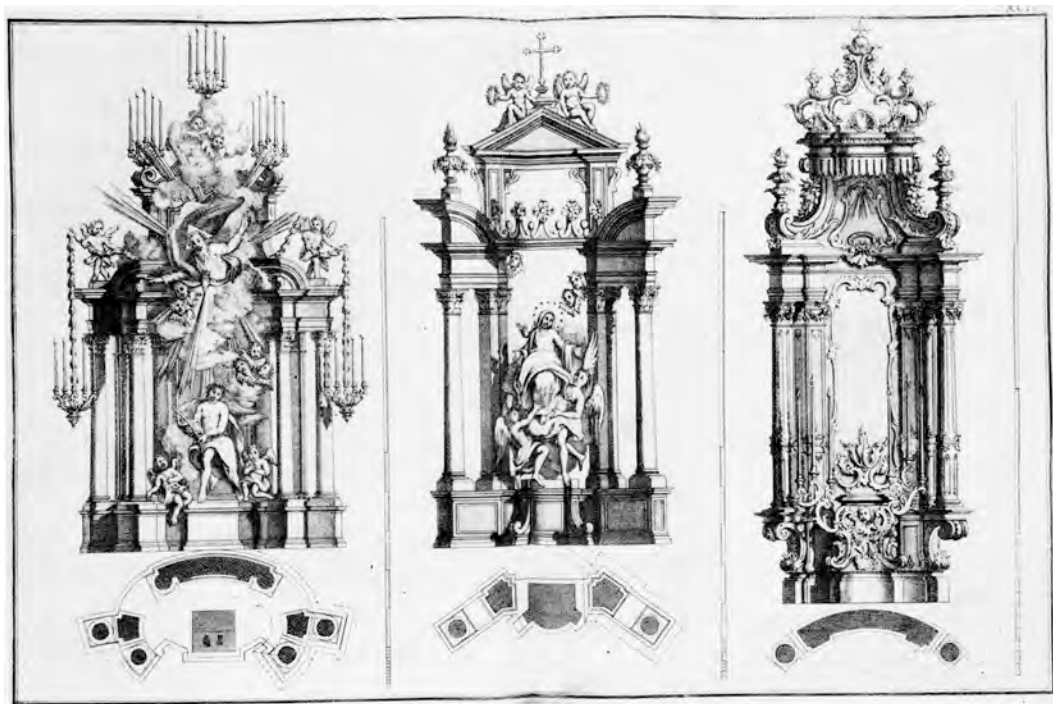


Figure 3.50. Vittone, Tabernacles and Thrones (*Istruzioni diverse*, pl. 94).

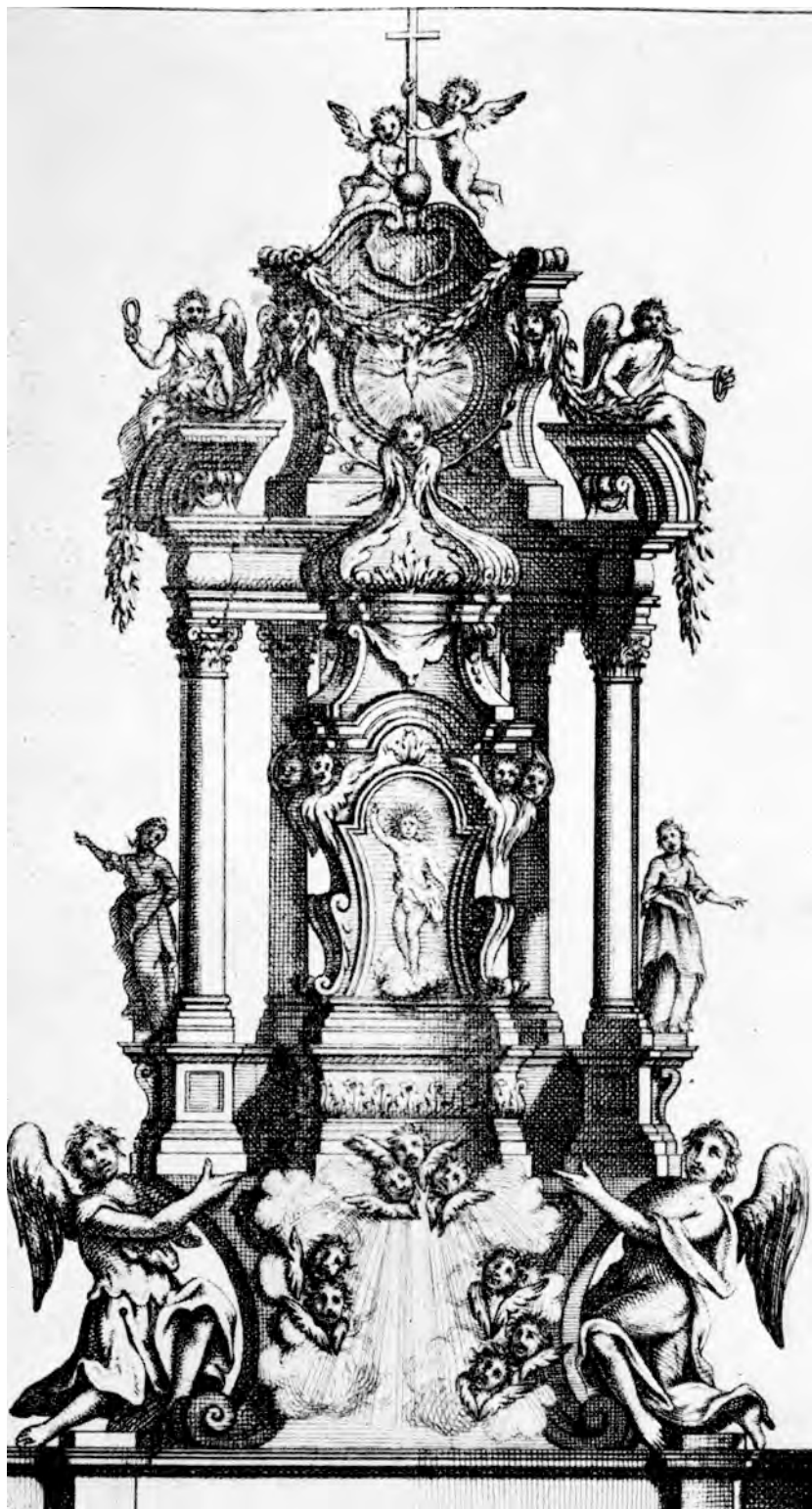


Figure 3.51. Vittone, Tabernacle (*Istruzioni diverse*, pl. 95, left figure).



Figure 3.52. Vittone, Tabernacle (*Istruzioni diverse*, pl. 95, right figure).

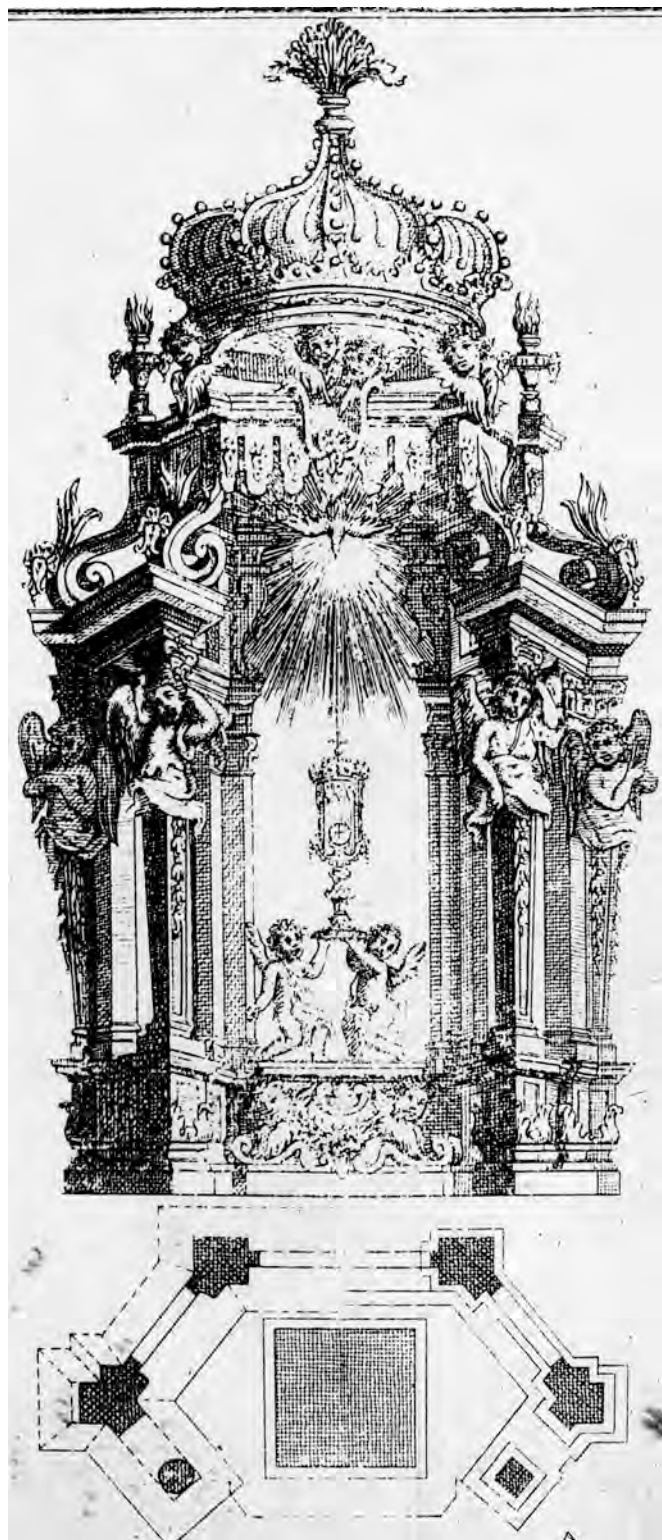


Figure 3.53. Vittone, Throne (*Istruzioni diverse*, pl. 96 right figure).

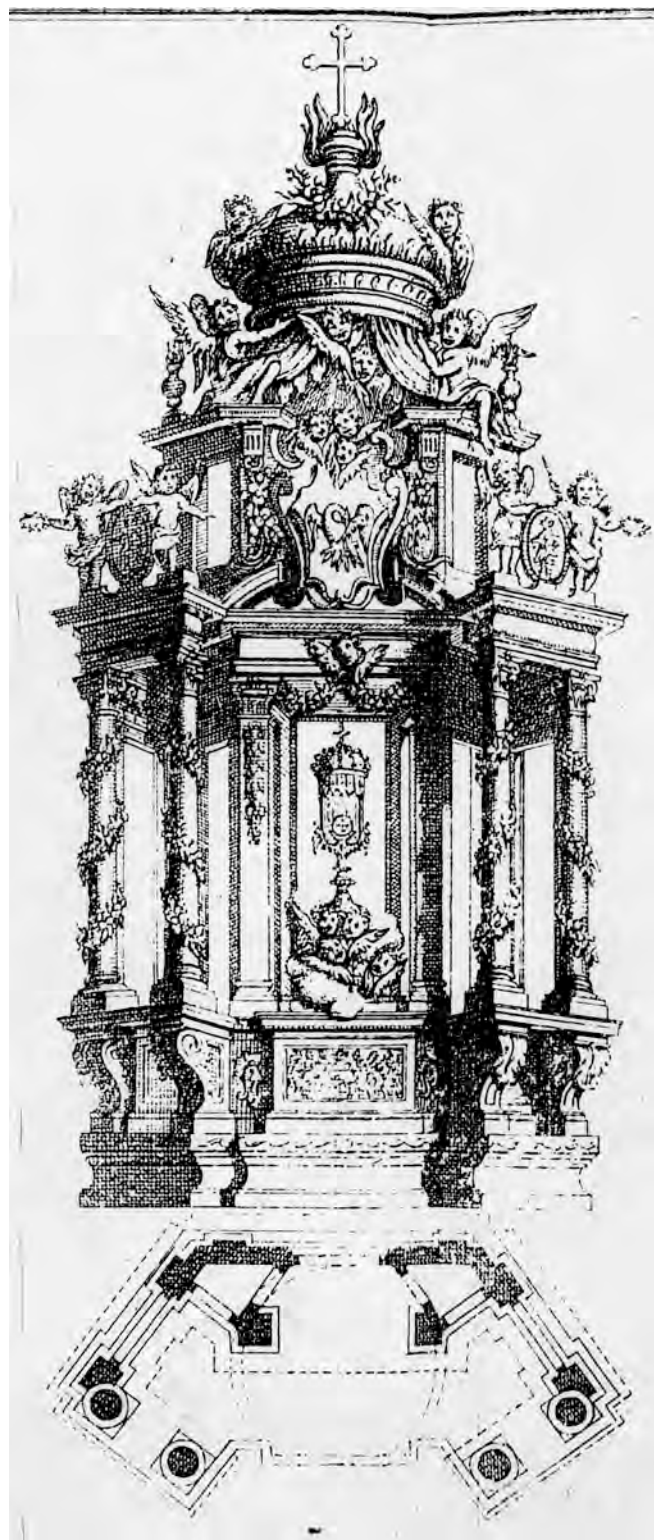


Figure 3.54. Vittone, Throne (*Istruzioni diverse*, pl. 96, center figure).

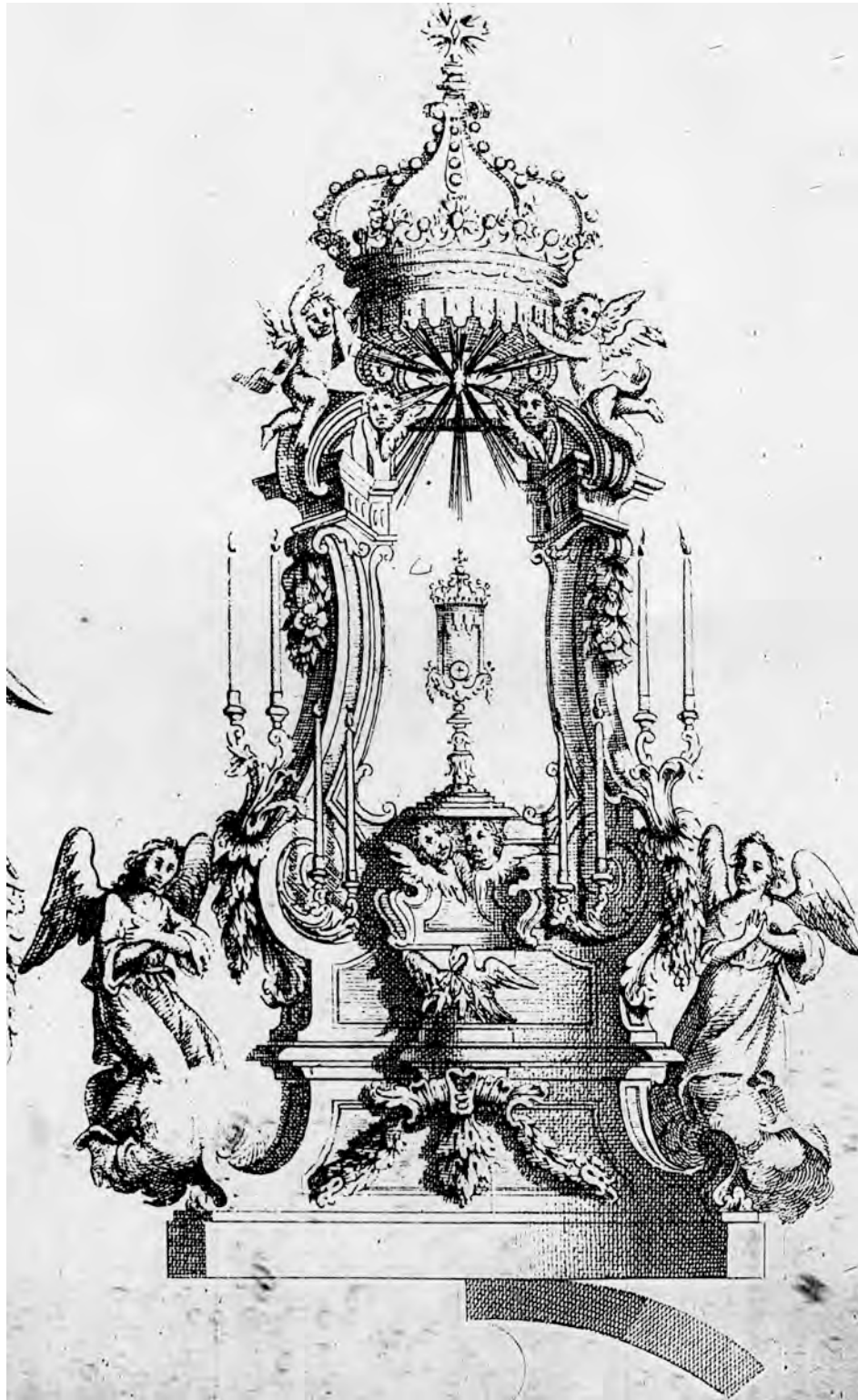


Figure 3.55. Vittone, Moveable Throne (*Istruzioni diverse*, pl. 97, right figure).

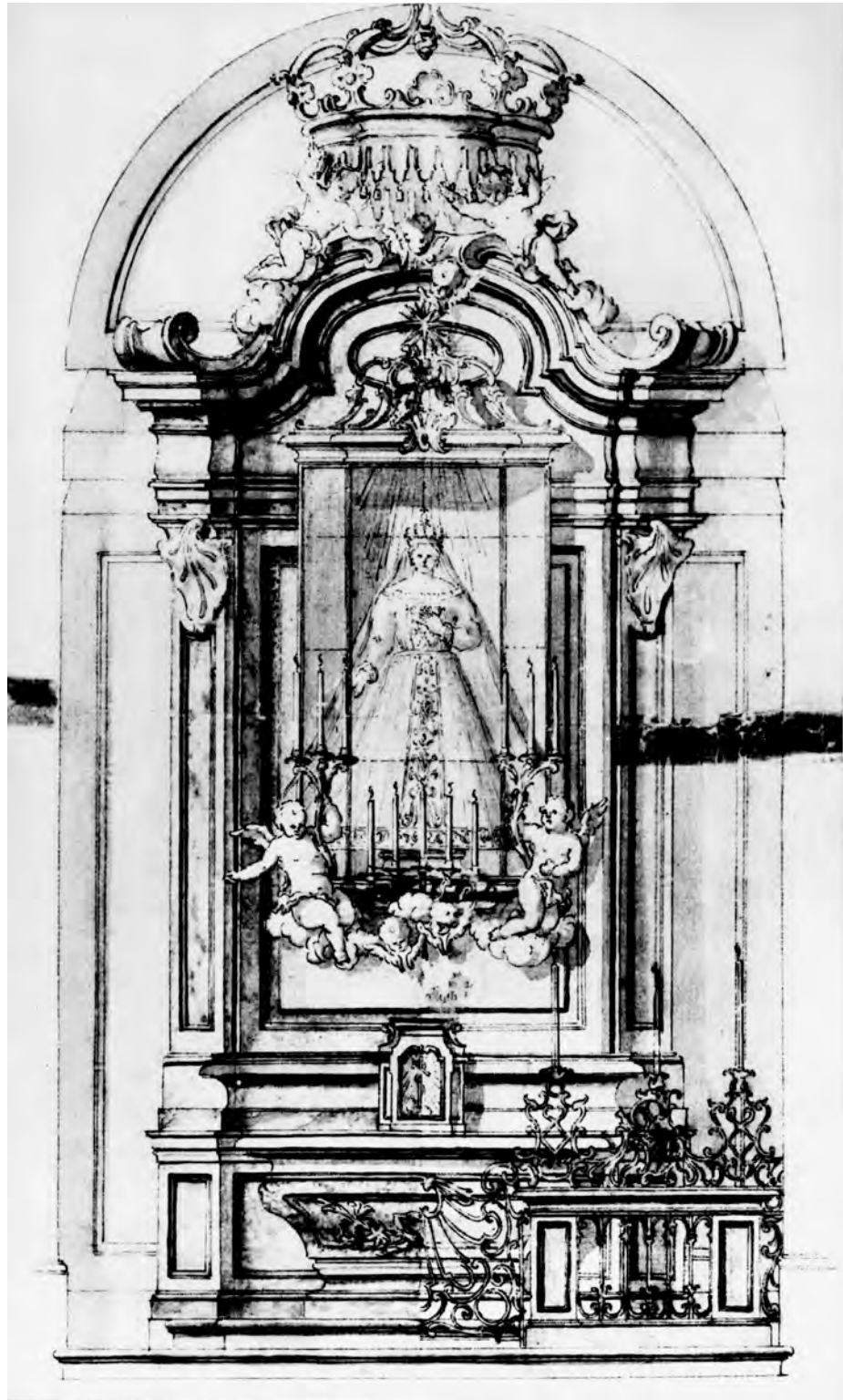


Figure 3.56. Vittone, Project for a Chapel Dedicated to the Madonna (Turin, Museo Civico).



Figure 3.57. Vittone, Project for the Chapel of the Madonna delle Grazie, Cathedral, Chieri, 1757 (Turin, Museo Civico).

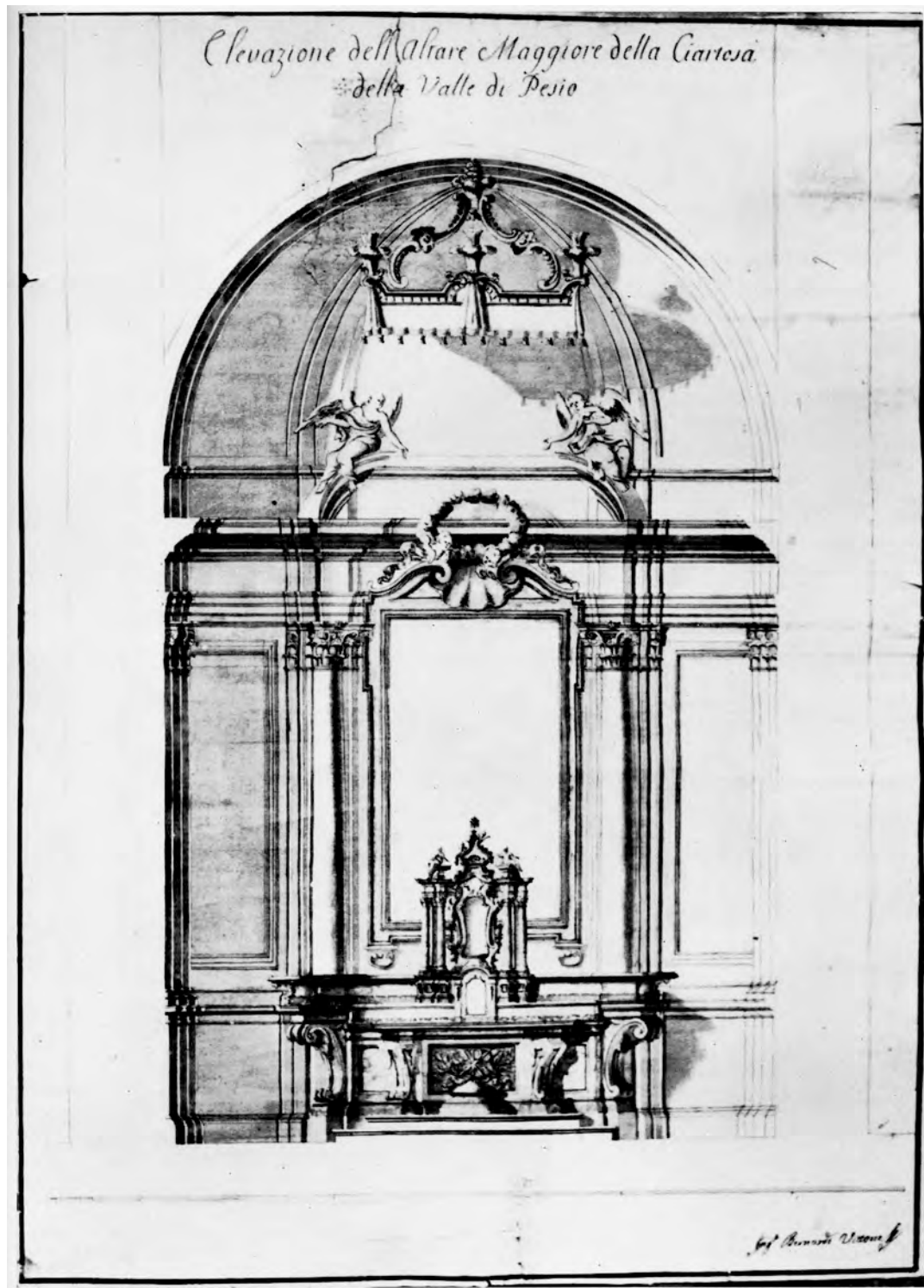


Figure 3.58. Vittone, Project for the High Altar of the Certosa, Pesio (Certosa di Pesio, Archivio dei Missionari della Consolata).

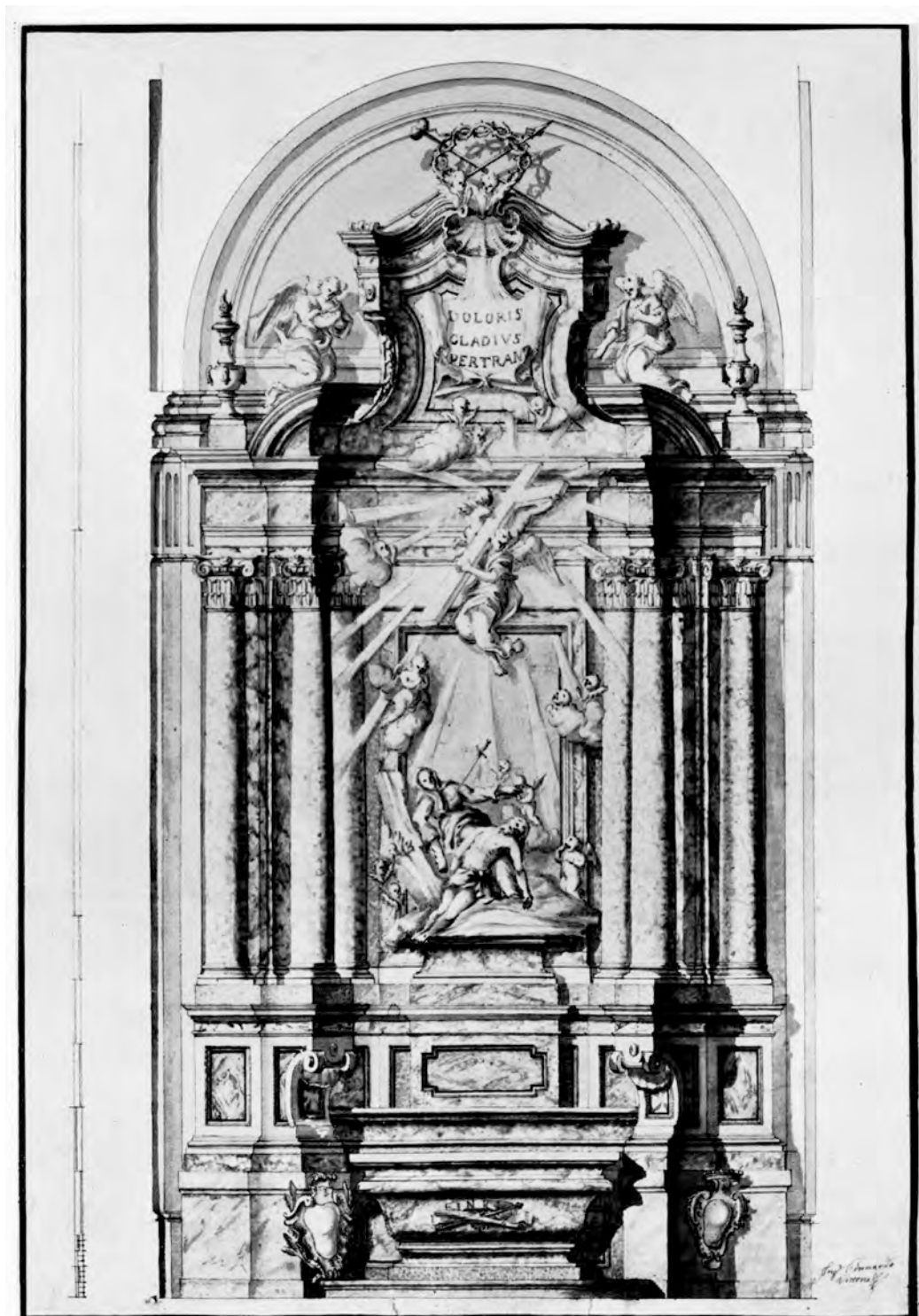


Figure 3.59. Vittone, Project for a Chapel of the Addolorata (Turin, Private Collection).

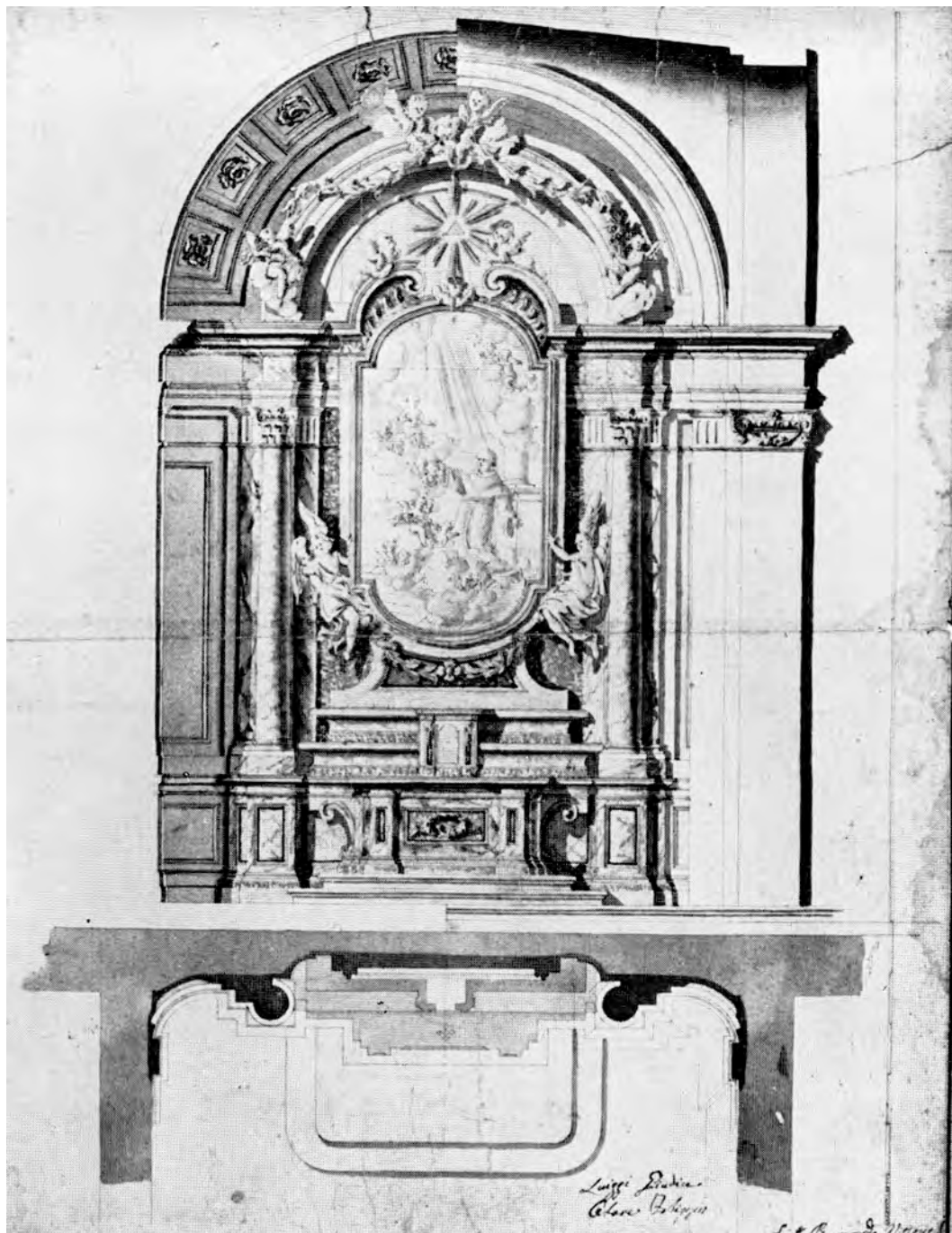


Figure 3.60. Vittone, Project for a Side Altar, San Francesco d'Assisi, Turin, 1767 (Turin, Museo Civico).

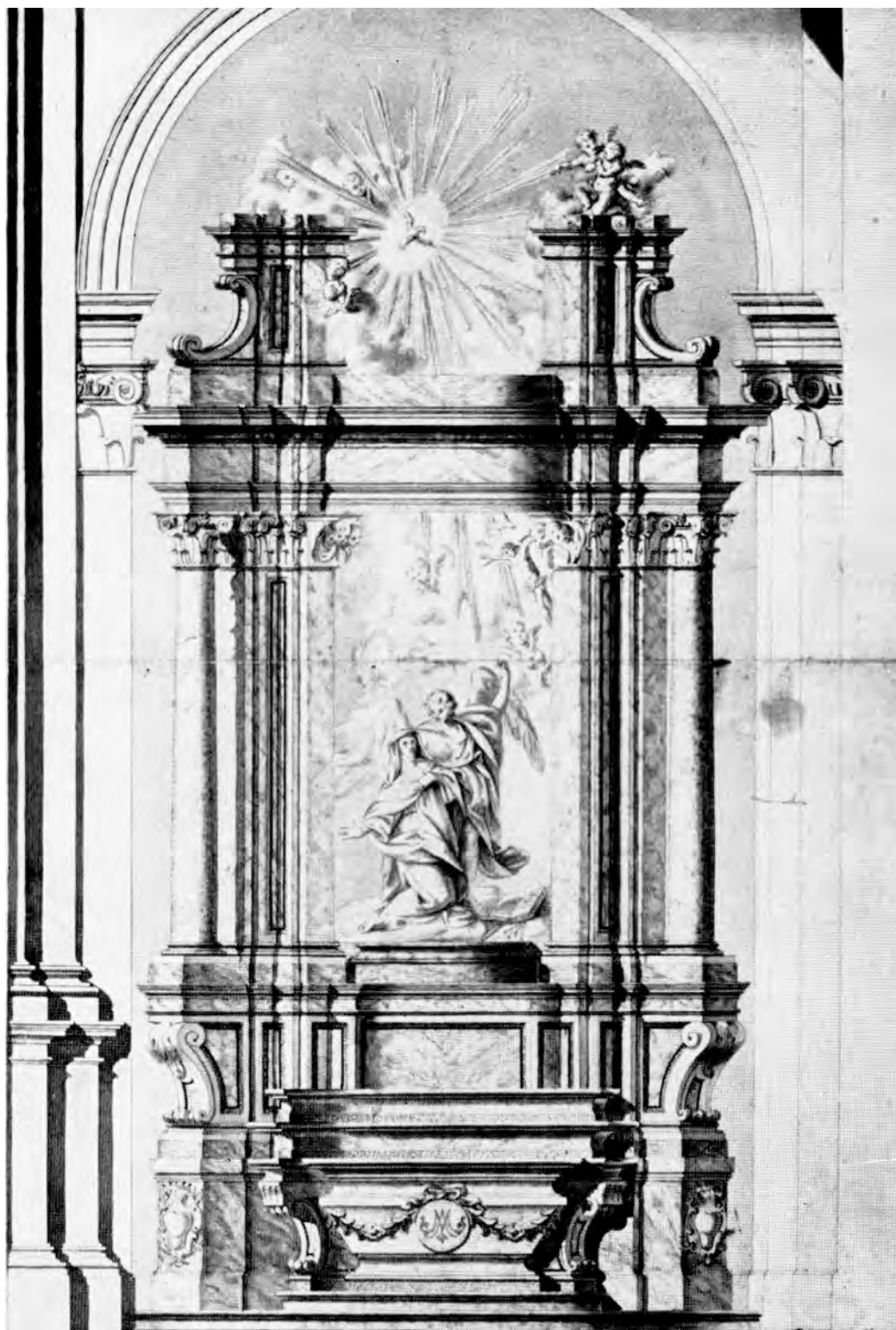


Figure 3.61. Vittone, Alternative Project for a Side Altar, San Francesco d'Assisi, Turin, 1767 (Turin, Museo Civico).



Figure 4.1. Cathedral of Sant'Evasio, Casale Monferrato, 12th Century, narthex vault.

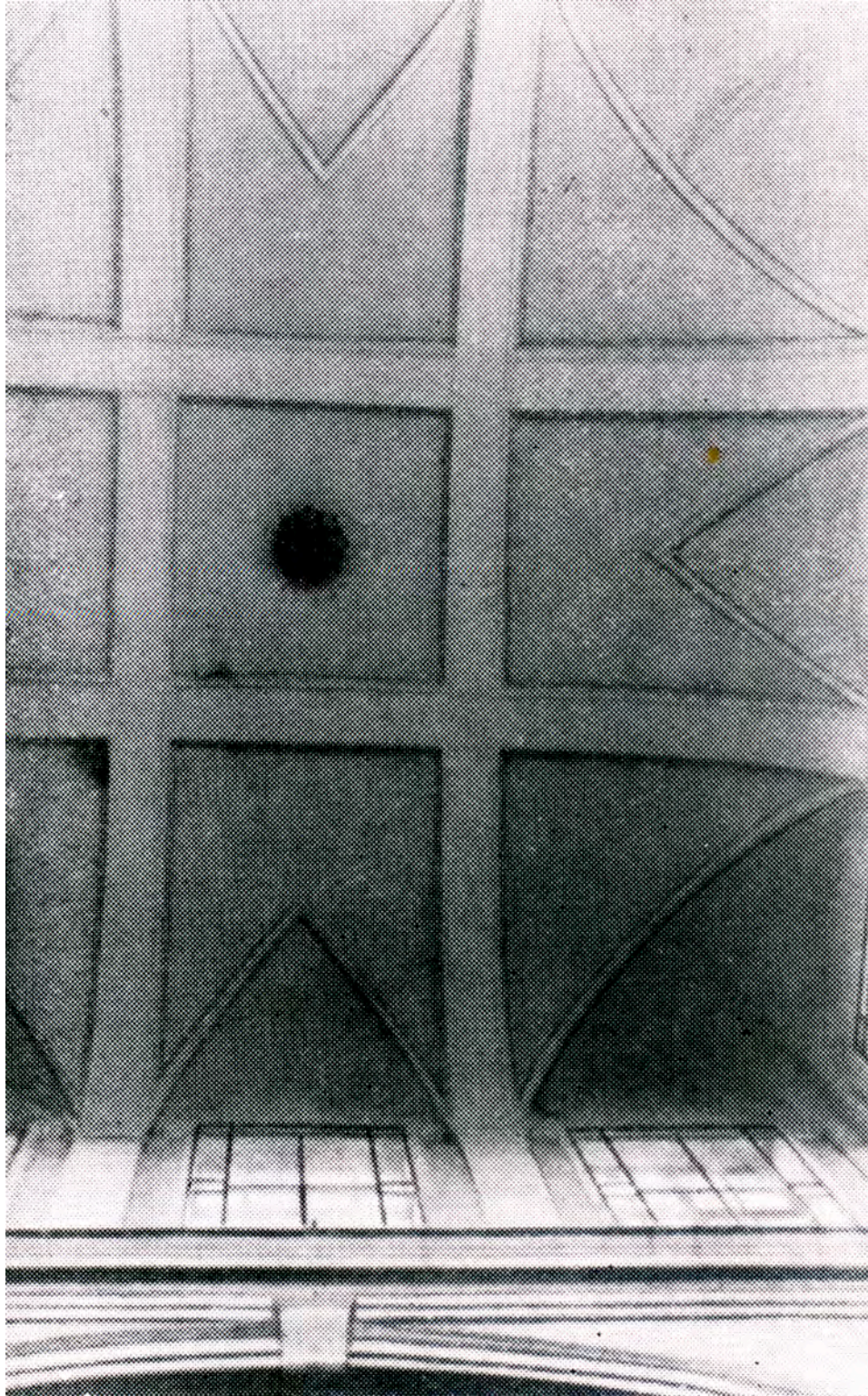


Figure 4.2. Bertano, Santa Barbara, Mantua, 1563, presbytery vault.



Figure 4.3. Borromini, Re Magi Chapel, Collegio di Propaganda Fide, Rome, 1662-64, vault.

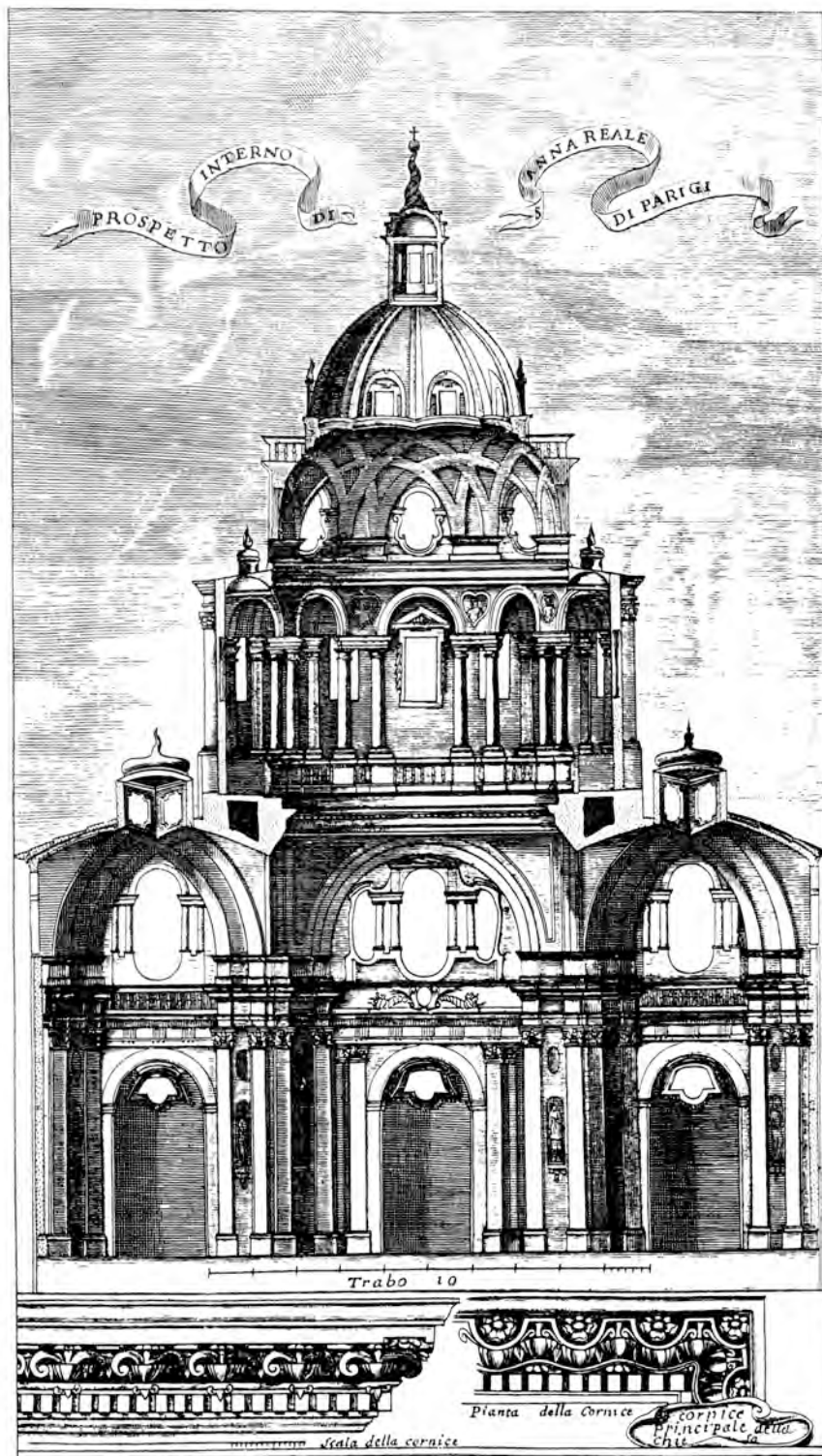


Figure 4.4. Guarini, Sainte-Anne-La-Royale, Paris, 1662-67, section (*Architettura civile*).



Figure 4.5. Guarini, San Lorenzo, Turin, 1666-87, dome.

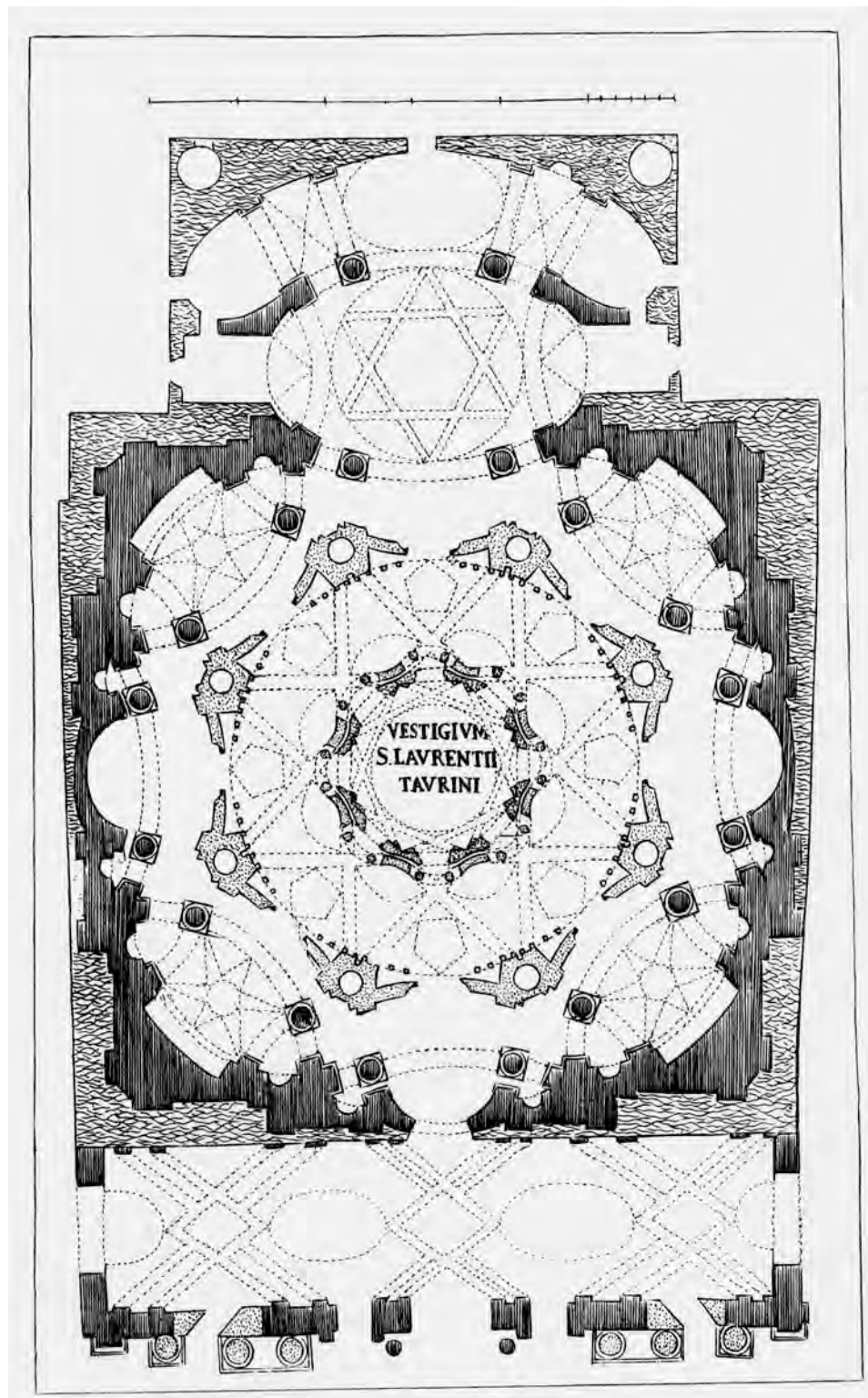


Figure 4.6. Guarini, San Lorenzo, Turin, 1666-87, plan (*Architettura civile*).

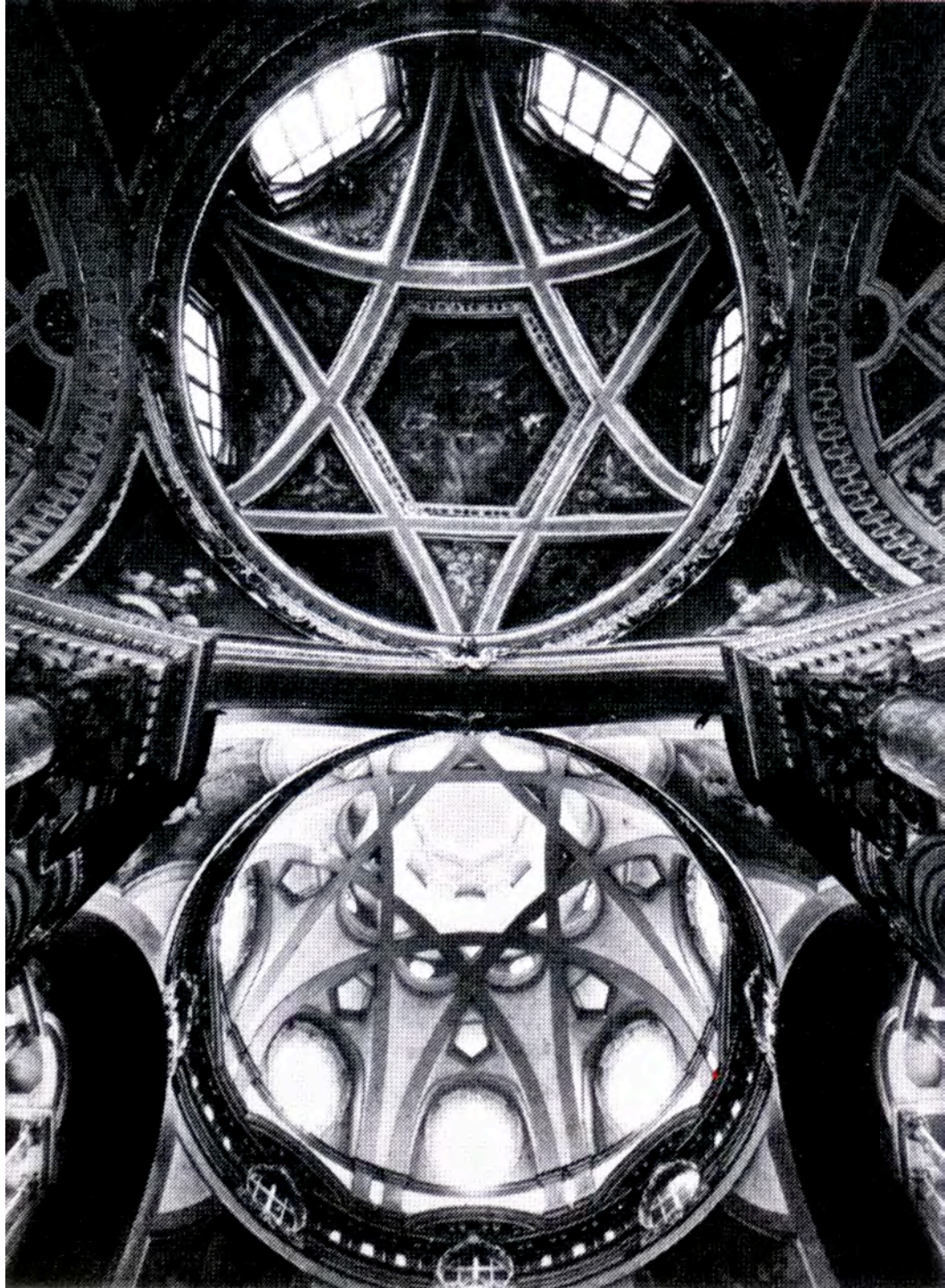


Figure 4.7. Guarini, San Lorenzo, Turin, 1666-87, presbytery vault and dome.



Figure 4.8. Guarini, Santissima Sindone, Turin, 1667-94, dome.

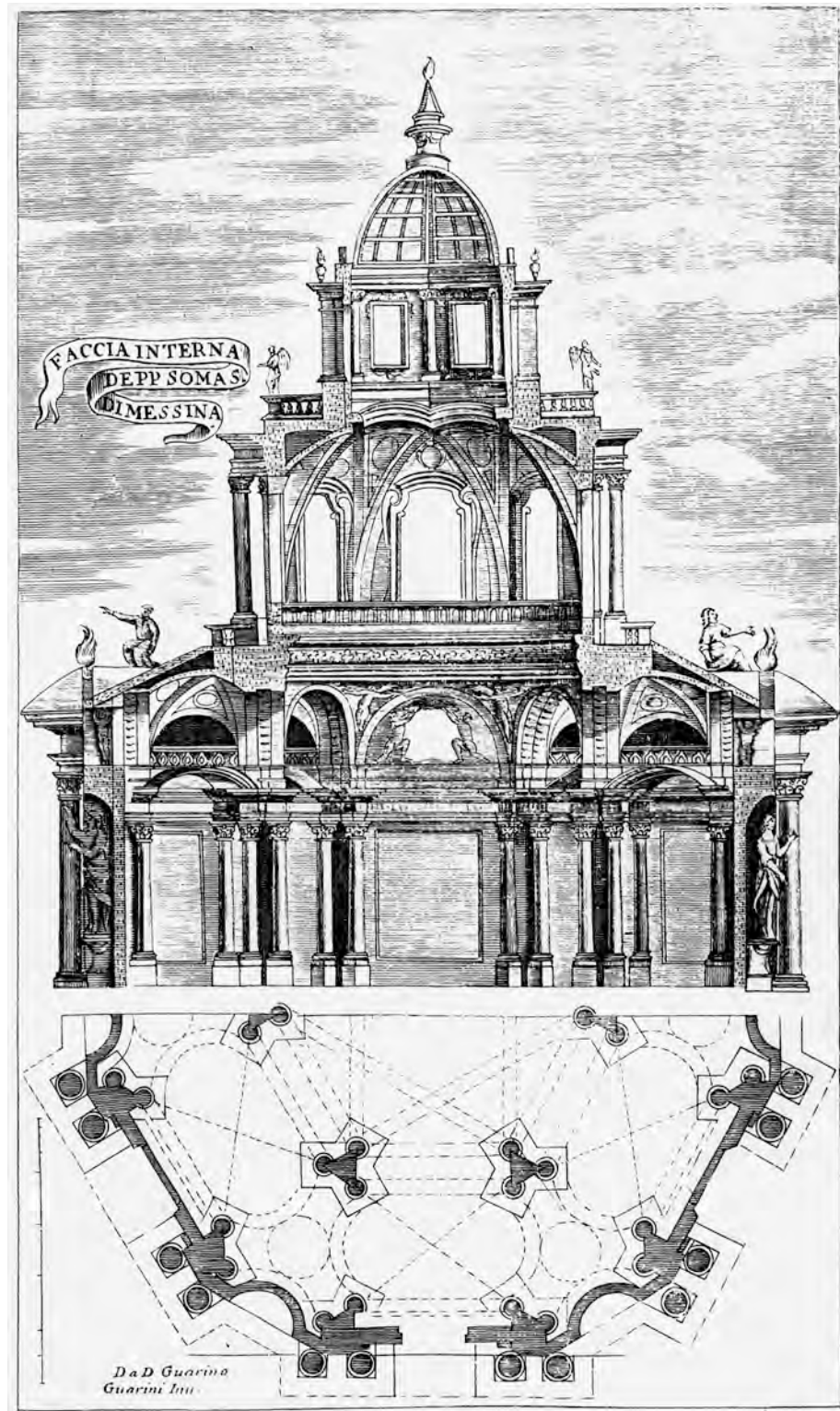


Figure 4.9. Guarini, Project for the Padri Somaschi, Messina, section and half-plan (*Architettura civile*).

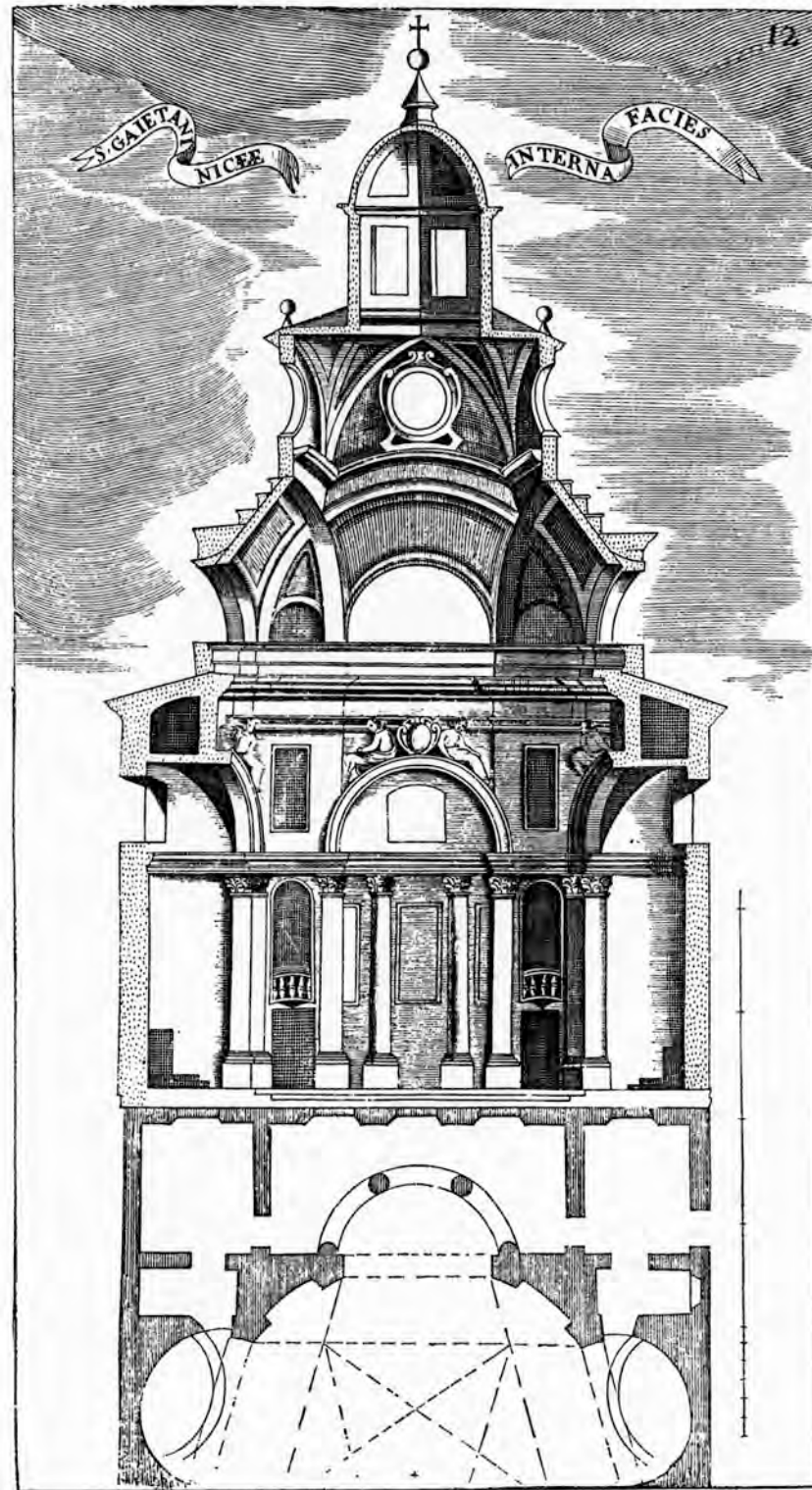


Figure 4.10. Guarini, Project for San Gaetano, Nice, section and half-plan (*Architettura civile*).



Figure 4.11. Guala, San Filippo Neri, Casale Monferrato, begun 1667, dome.

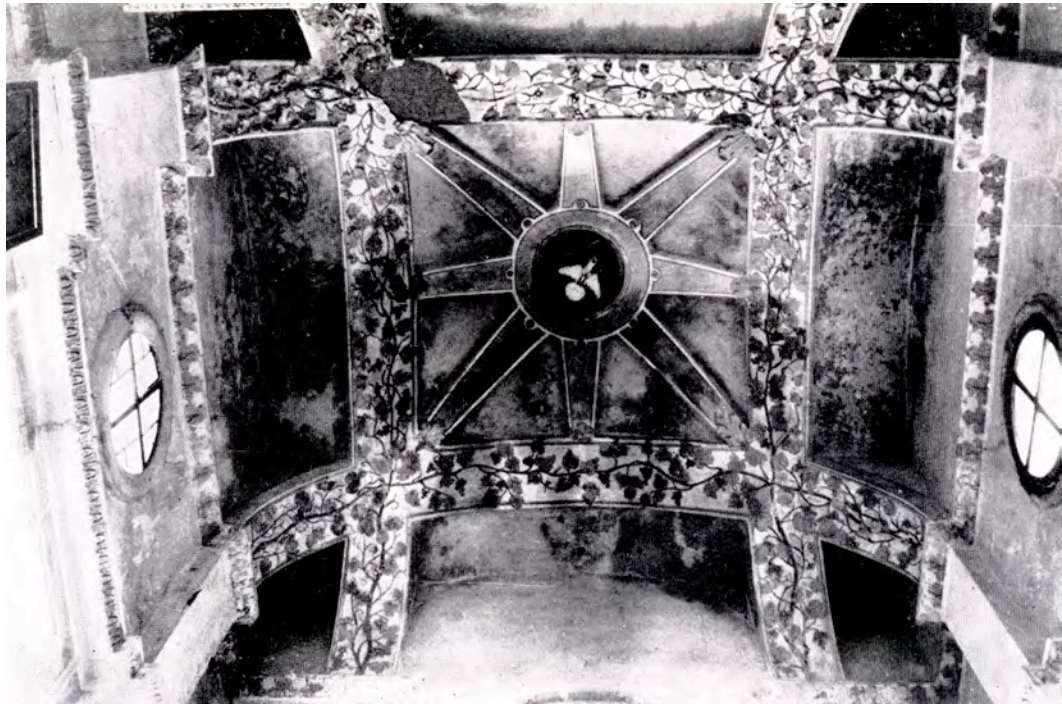


Figure 4.12. Bertola, Santa Maria delle Vigne, Trino Vercellese, 1696-1713, presbytery vault.



Figure 4.13. Palazzo Madama, Turin, *ca.* 1660, *salone* vault.

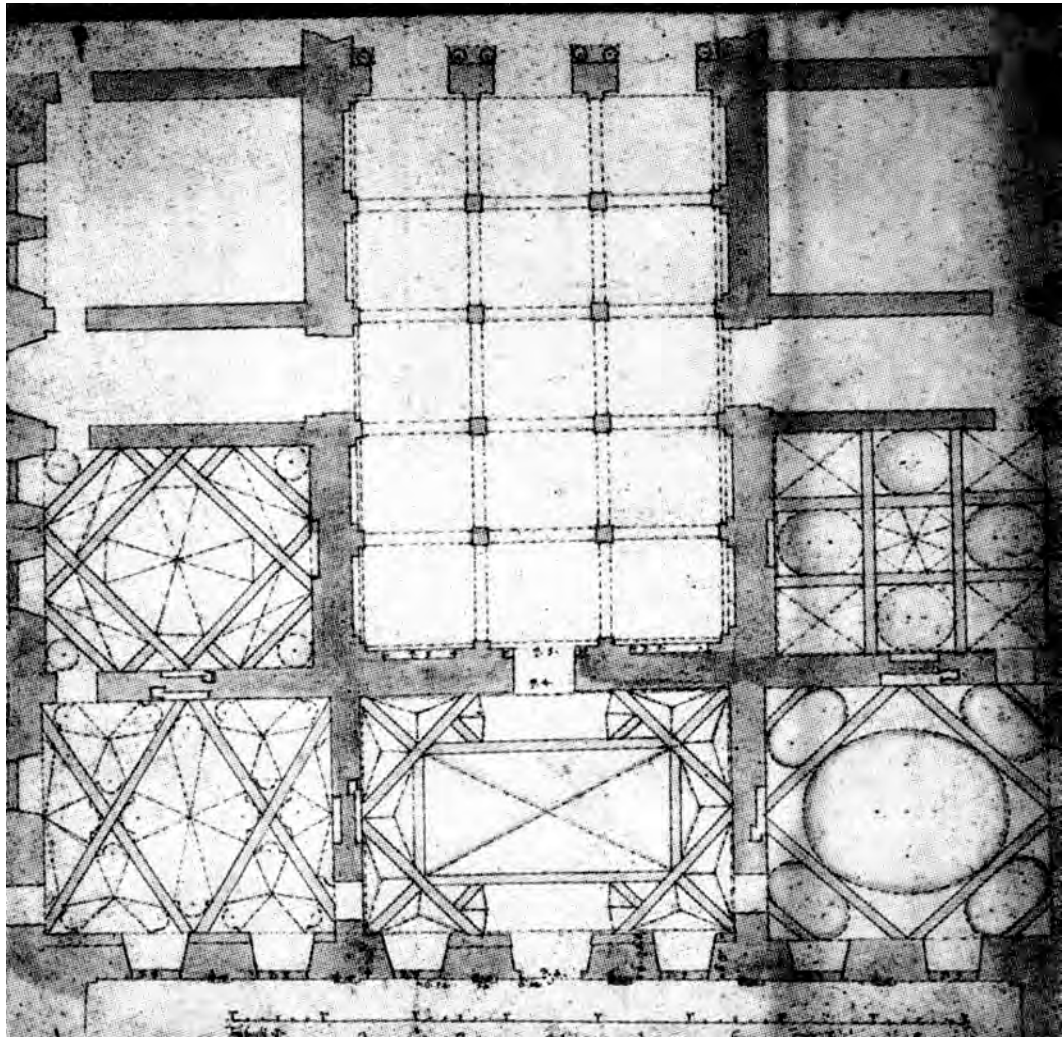


Figure 4.14. Guarini, Project for the Castello, Racconigi, 1676-83, plan (Turin: Archivio di Stato).

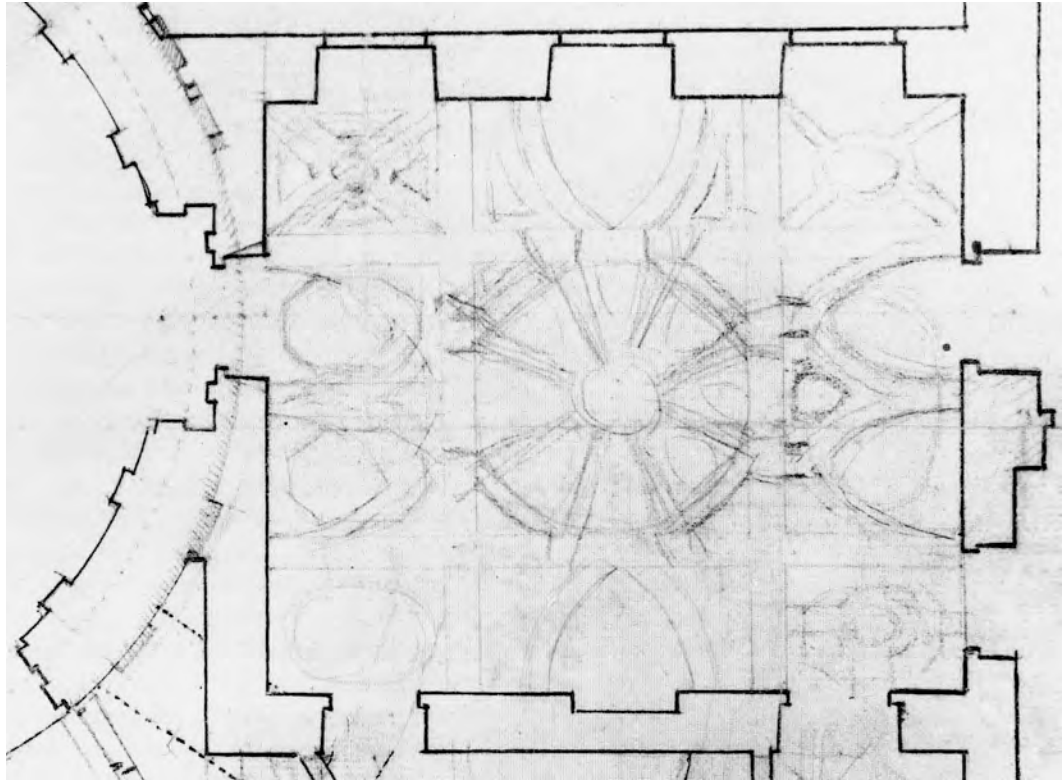


Figure 4.15. Guarini, Palazzo Carignano, Turin, begun 1679, vault study (Turin, Archivio di Stato).

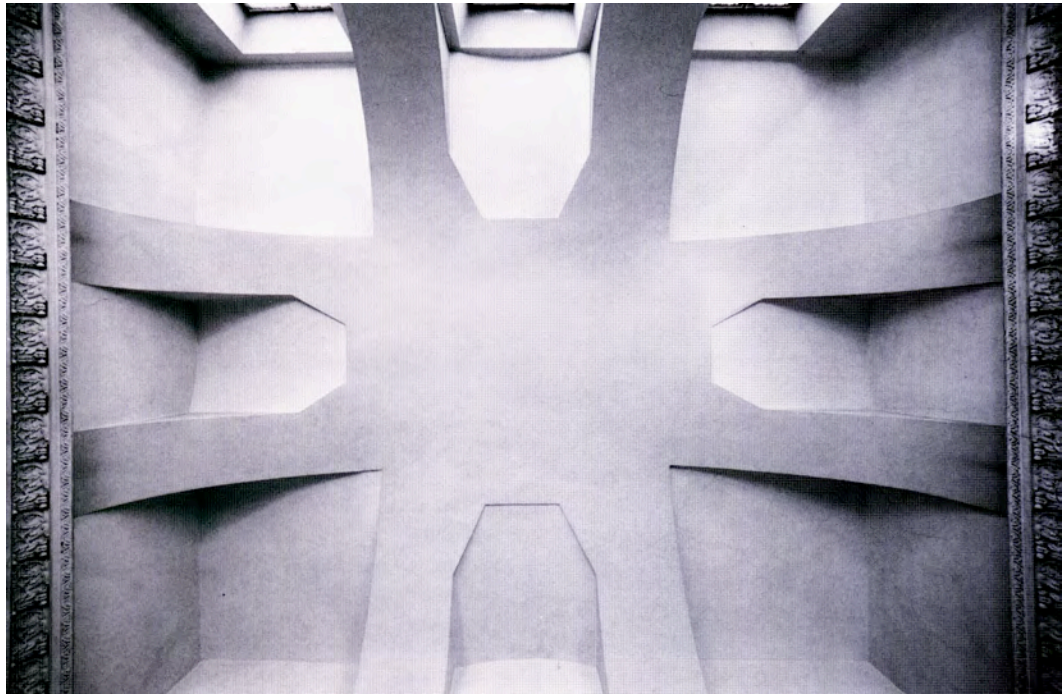


Figure 4.16. Guarini, Palazzo Carignano, Turin, begun 1679, vault.

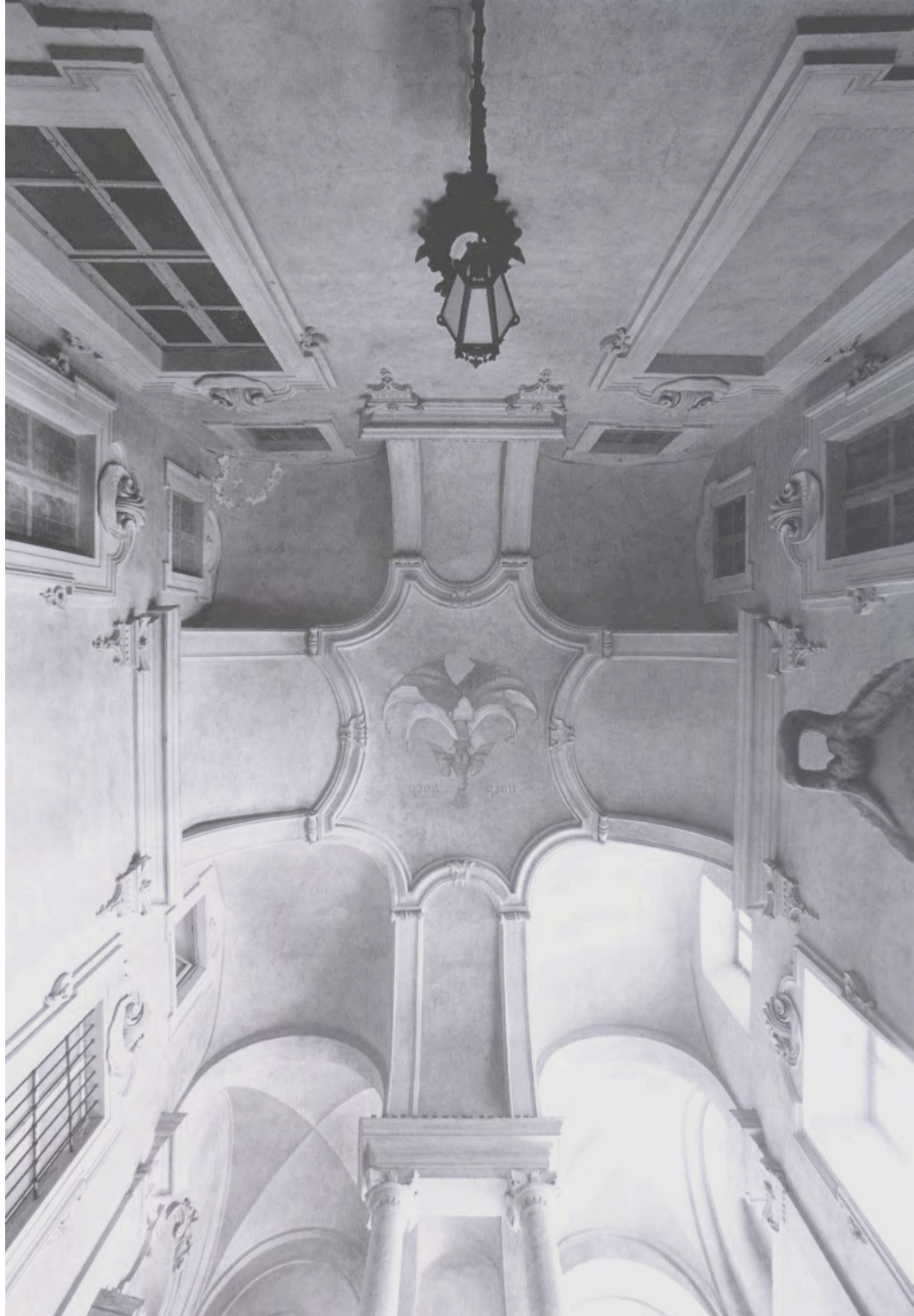


Figure 4.17. Plantery, Palazzo Saluzzo Paesana, 1715-22, stairwell vault.

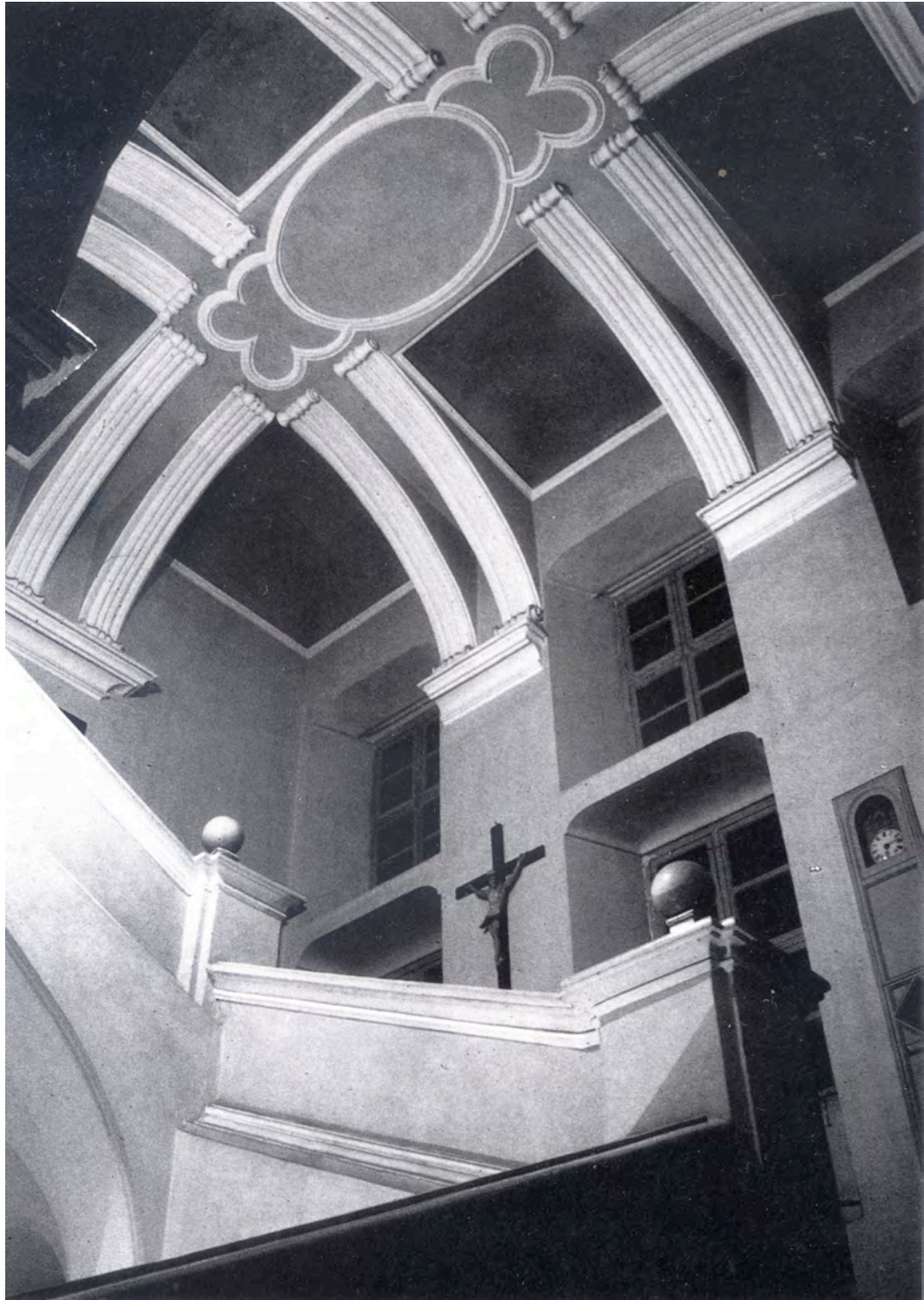


Figure 4.18. Plantery, Convent of Santa Chiara, Bra, *ca.* 1722, stairwell vault.



Figure 4.19. Vittone, Ricovero dei Catecumeni, Pinerolo, 1740, atrium vault.



Figure 4.20. Juvarra, Palazzo Martini di Cigala, Turin, 1716-19, atrium vault.



Figure 4.21. Roero di Guarene, Palazzo del Roero, Guarene, 1726-40, staircase vault.

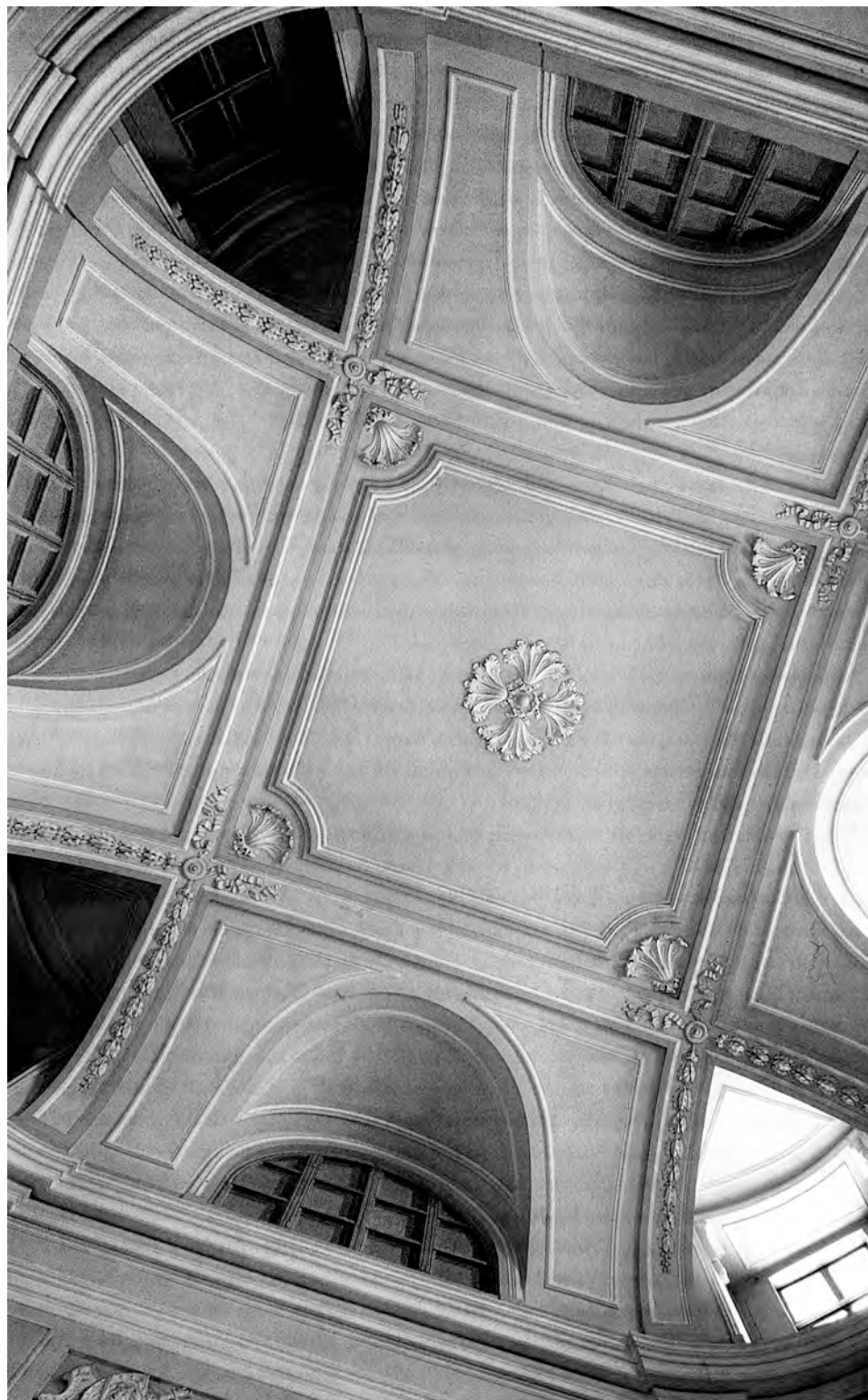


Figure 4.22. Barberis, Palazzo Vallesa della Martiniana, Turin, 1783-86, *salone* vault.



Figure 4.23. Plantery, Palazzo Saluzzo Paesana, Turin, 1715-22, atrium vault.



Figure 4.24. Plantery, Palazzo Cavour, Turin, 1729, atrium vault.

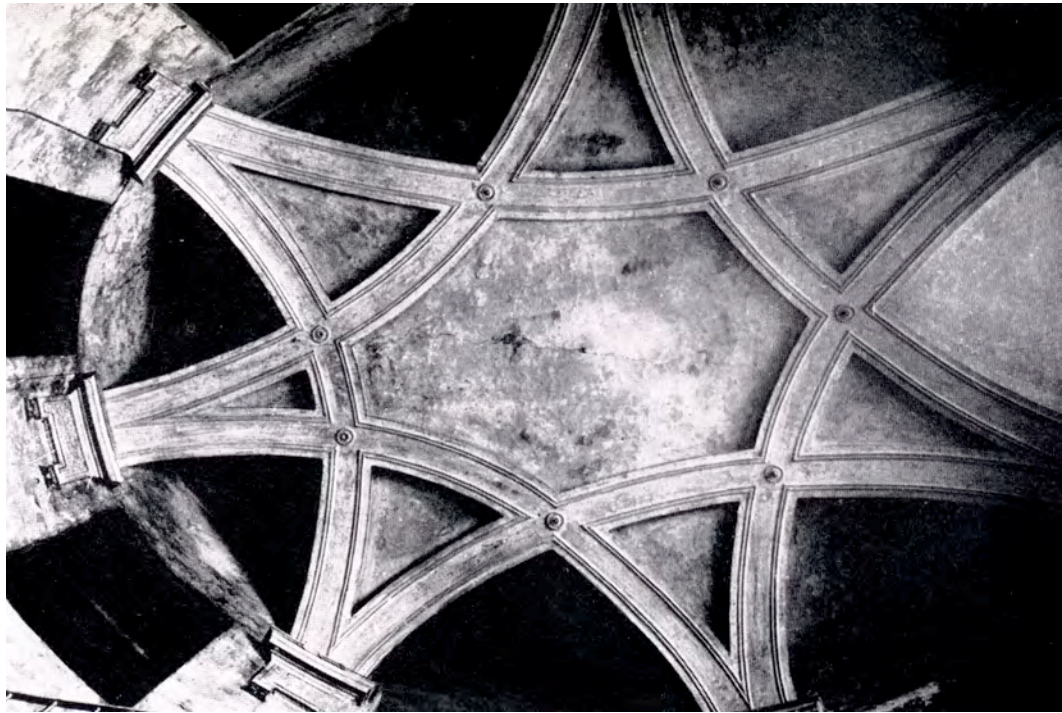


Figure 4.25. Anonymous, Residence on Piazza Emanuele Filiberto, Turin, Eighteenth Century, stairwell vault.



Figure 4.26. Nicolis di Robilant, Misericordia, Turin, 1751, presbytery vault.

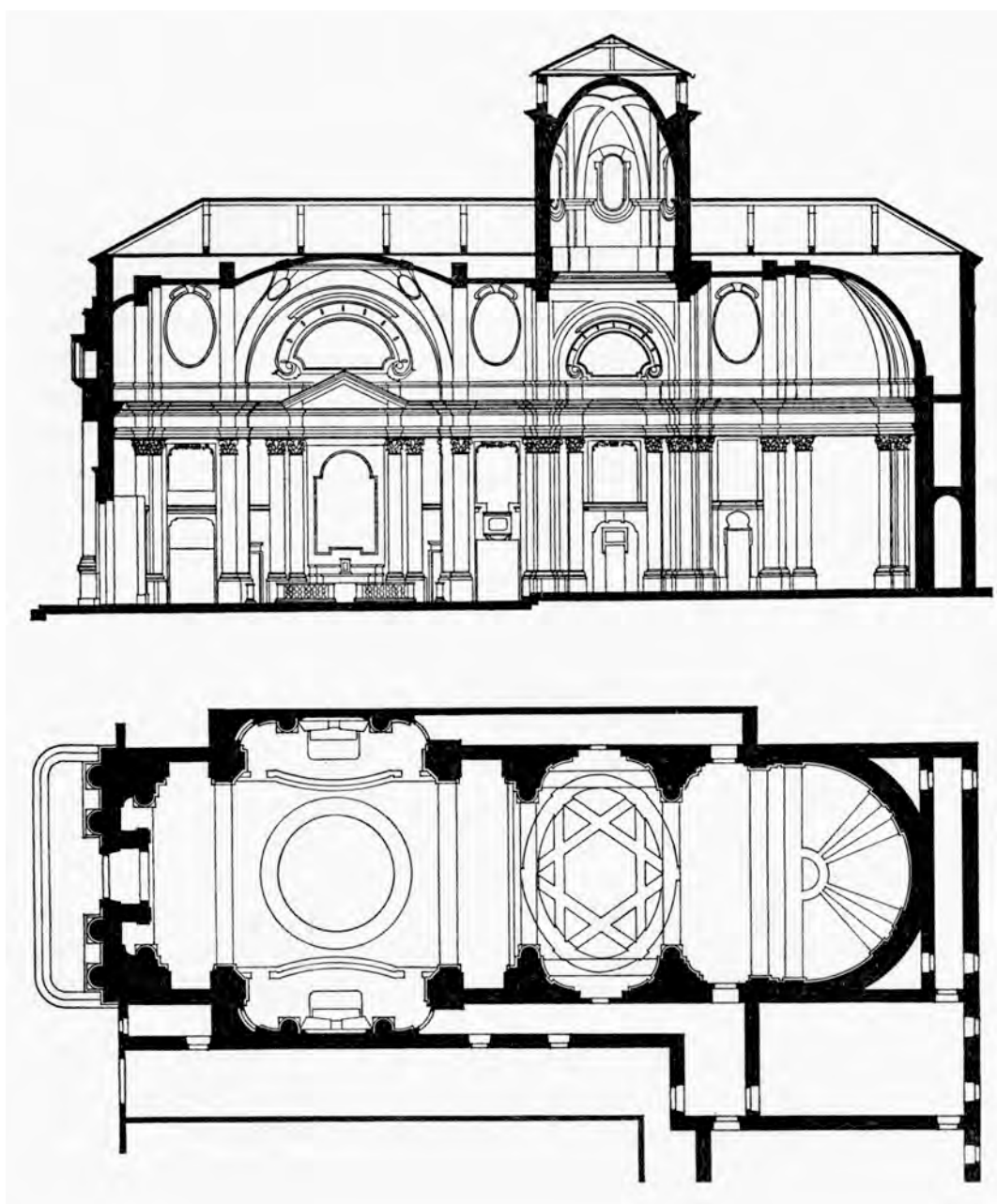


Figure 4.27. Nicolis di Robilant, *Misericordia*, Turin, 1751, section and plan.



Figure 4.28. Nicolis di Robilant, San Giovanni, Nice, 1769-71, presbytery vault.

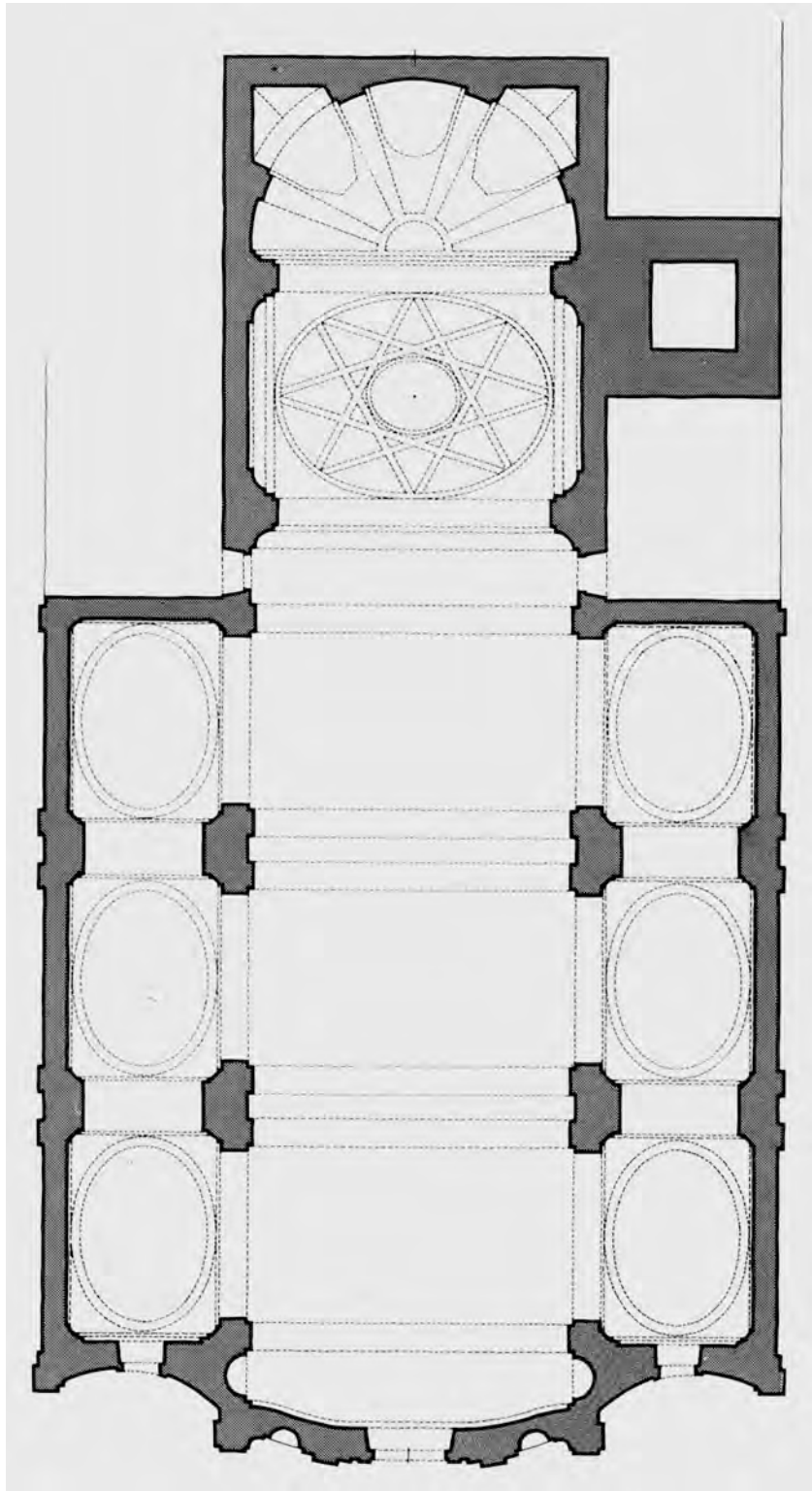


Figure 4.29. Buniva, San Grato, Piscina, 1766, plan.

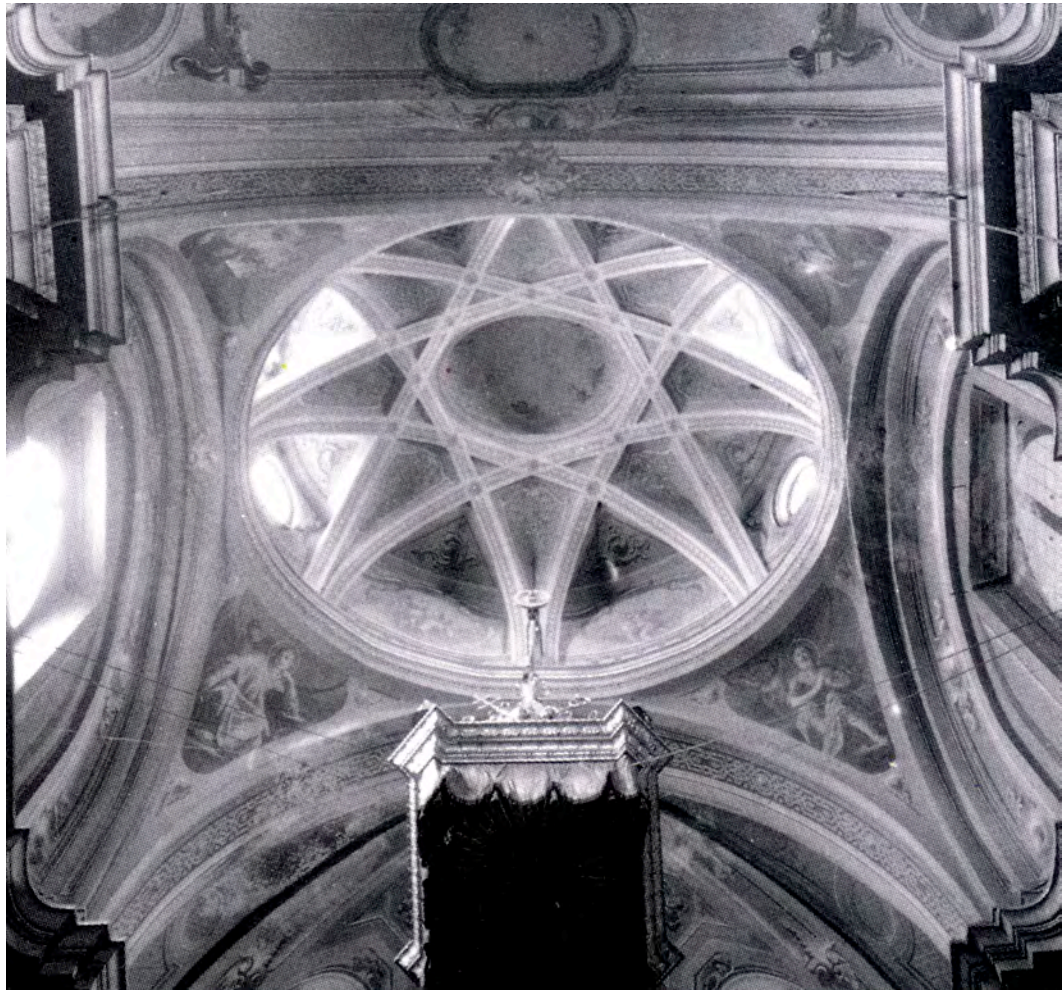


Figure 4.30. Buniva, San Grato, Piscina, 1766, presbytery vault.

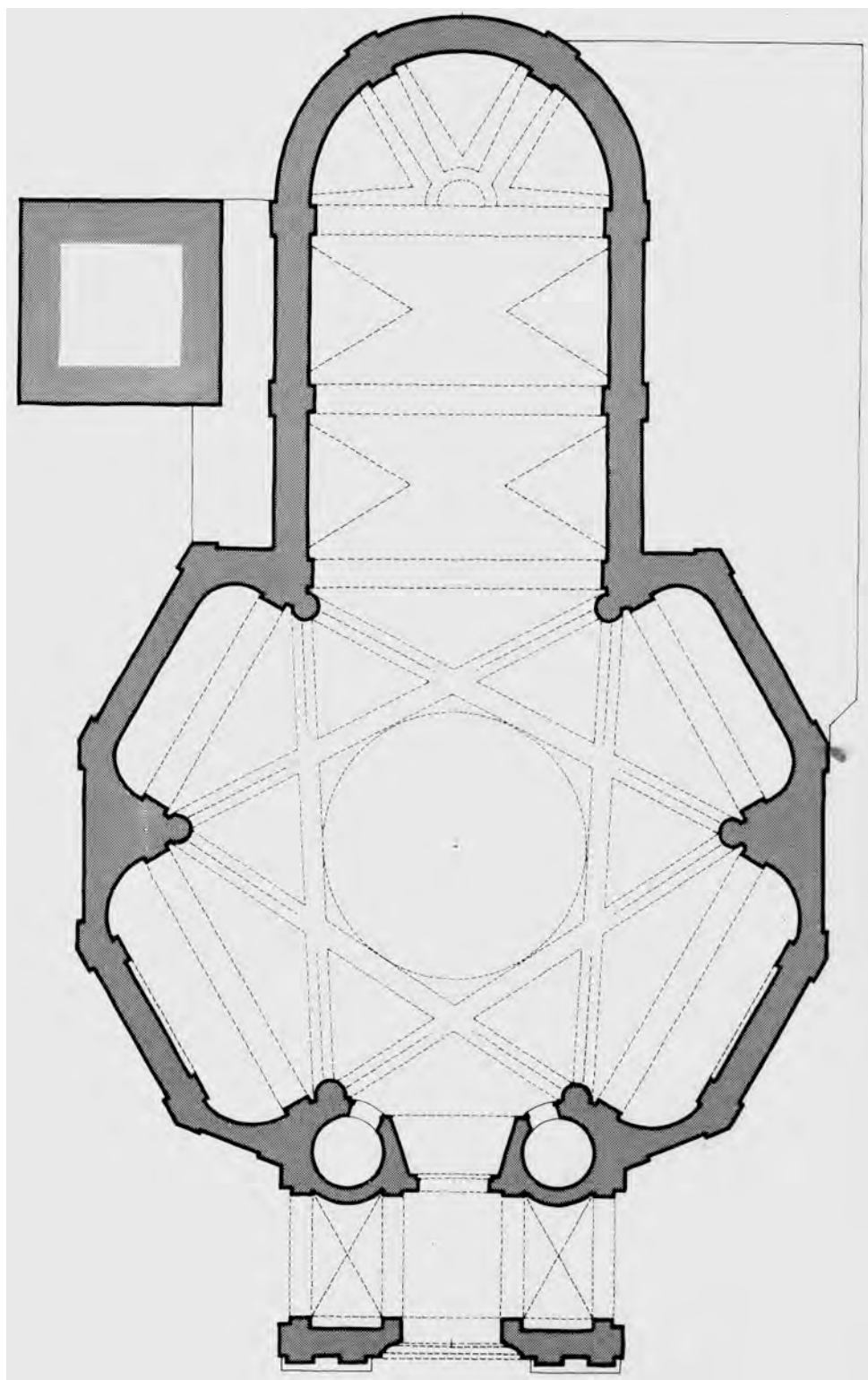


Figure 4.31. Anonymous, Sant'Antonio, Occhieppo Superiore, 1768-74, plan.



Figure 4.32. Quarini, San Giacomo, Balangero, 1789, presbytery vault.



Figure 4.33. Antinori, Abbey Church, Monte Oliveto Maggiore (near Siena), 1772-78, dome.



Figure 4.34. Sardi, Santa Maria del Rosario, Marino (near Rome), 1712-13, dome.

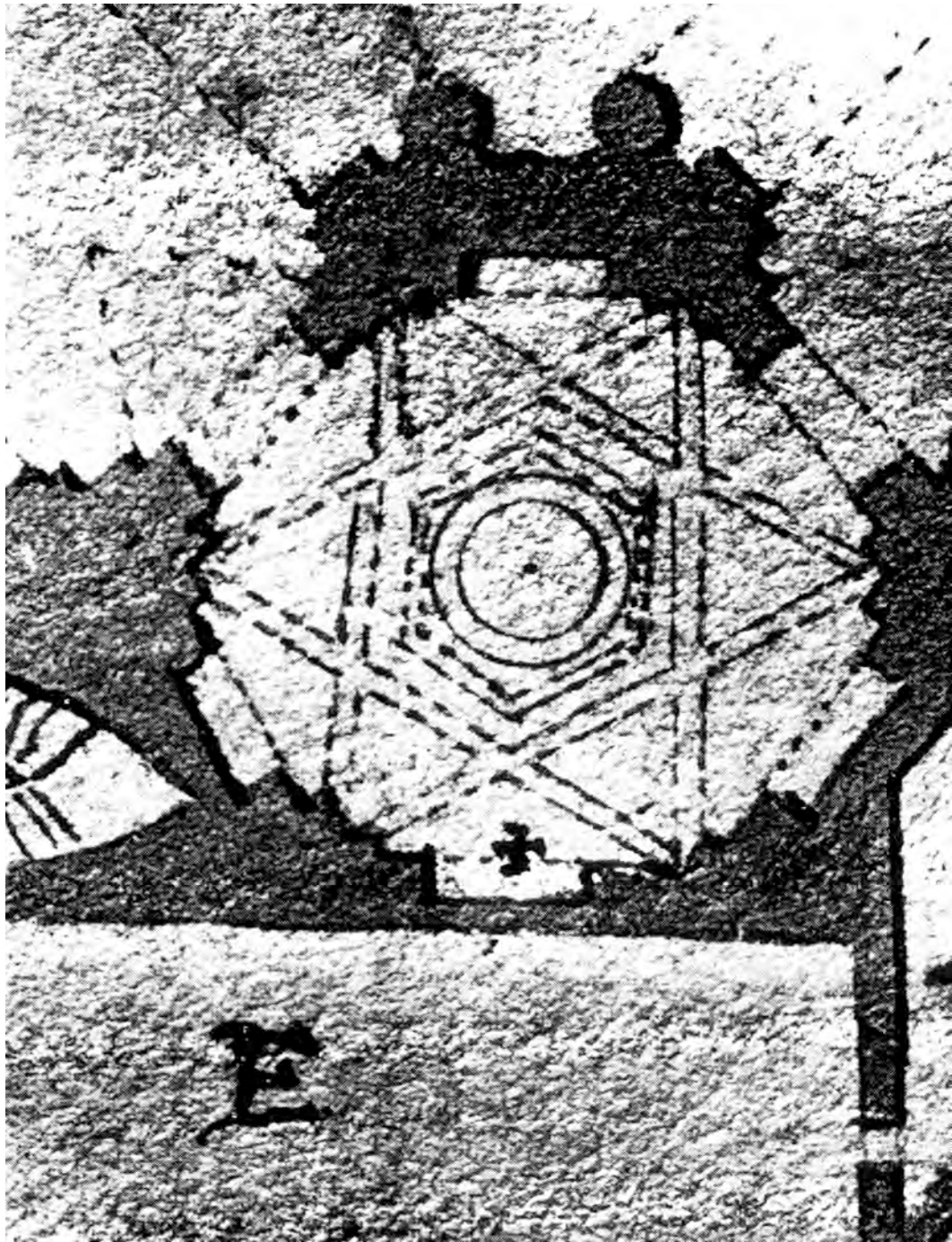


Figure 4.35. Vittone, Hexagonal Chapel, Project for a City Surrounded by the Sea, 1732, plan detail (Rome, Accademia di San Luca).

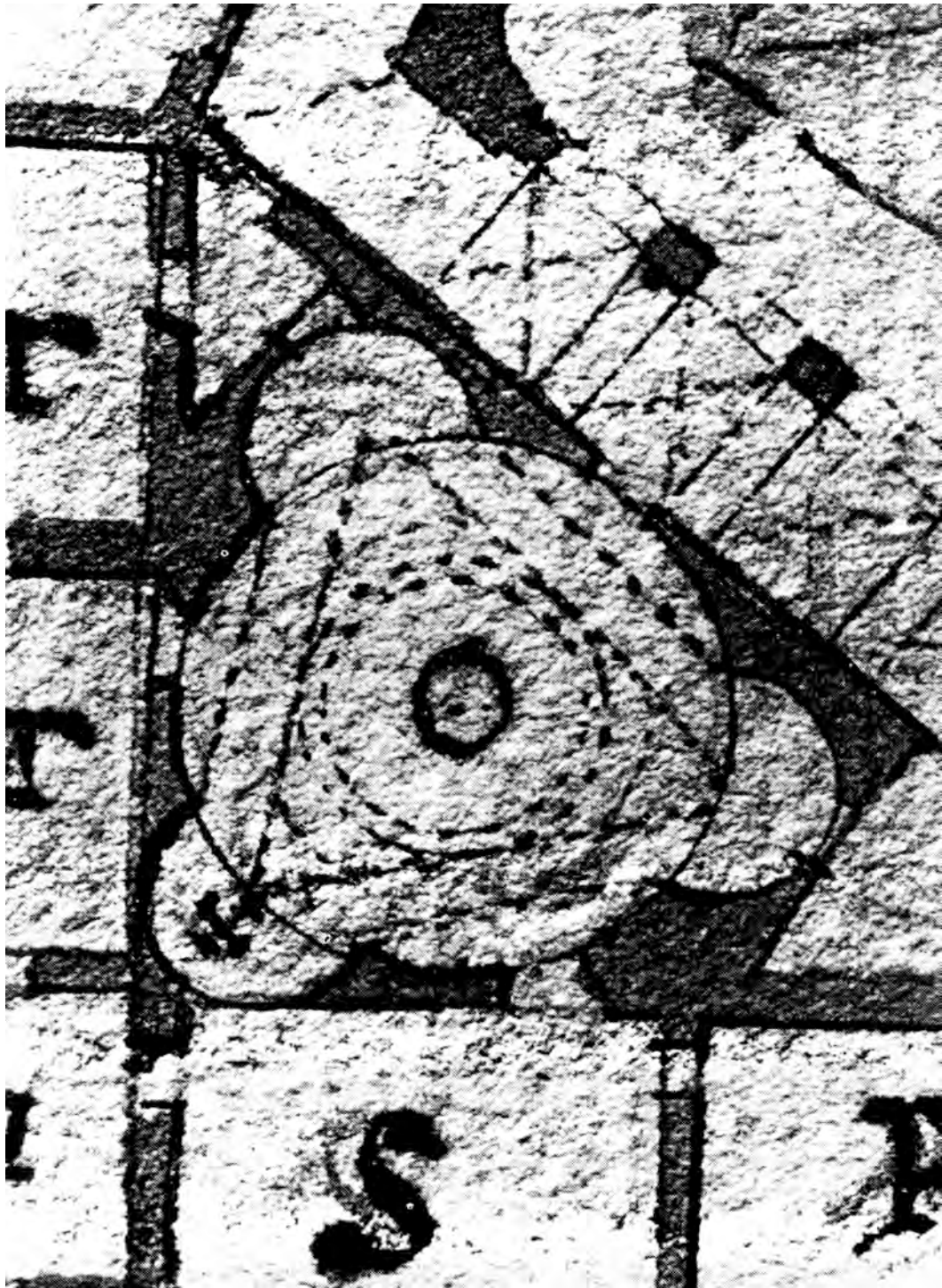


Figure 4.36. Vittone, Triangular Chapel, Project for a City Surrounded by the Sea, 1732, plan detail (Rome, Accademia di San Luca).



Figure 4.37. Ercolani, Project for an Academy of Fine Arts, 1708, plans (Rome, Accademia di San Luca).

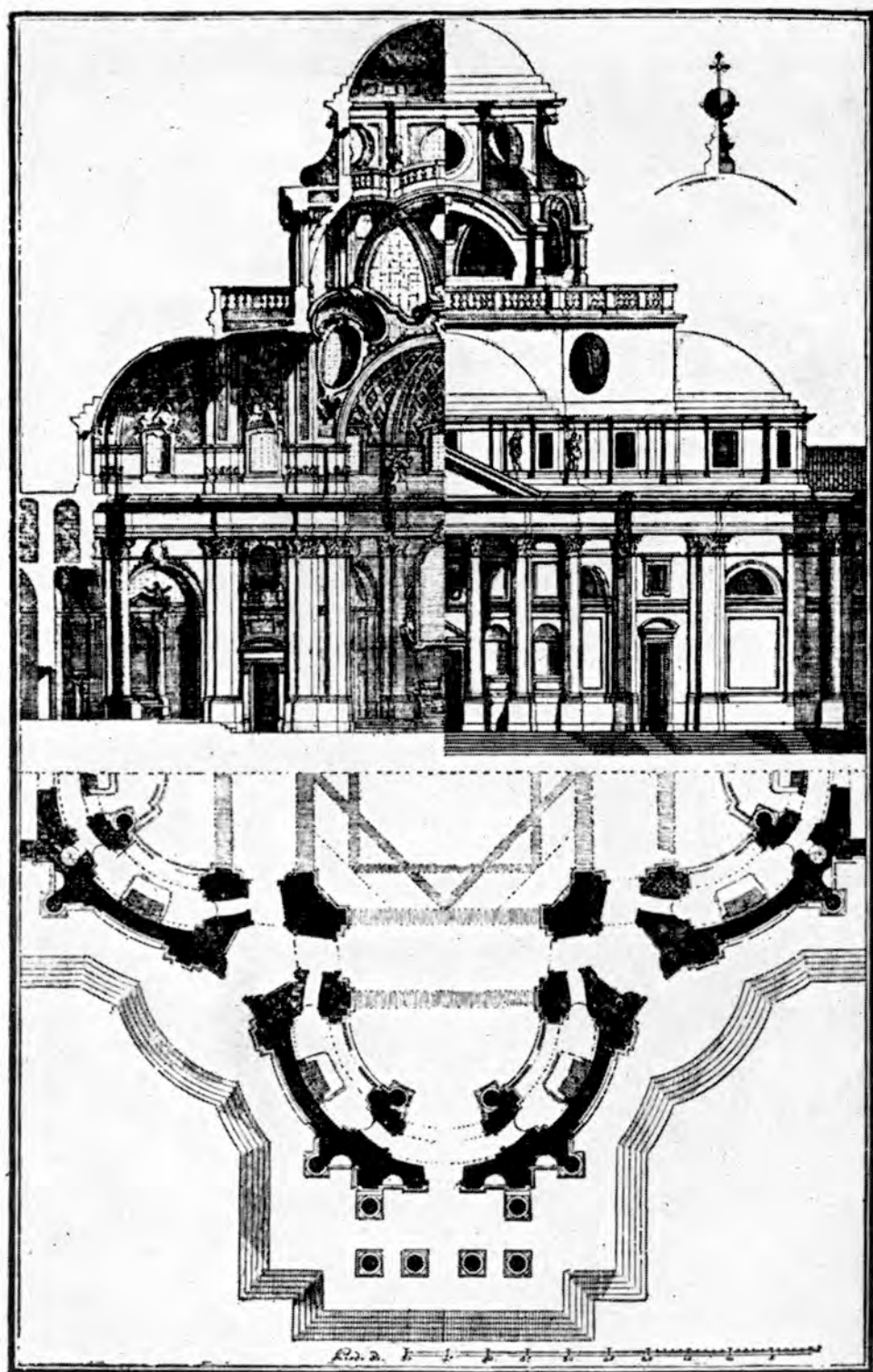


Figure 4.38. Vittone, Project for a Parish Church "in some very conspicuous place," section-elevation and half-plan (*Istruzioni diverse*, pl. 81).

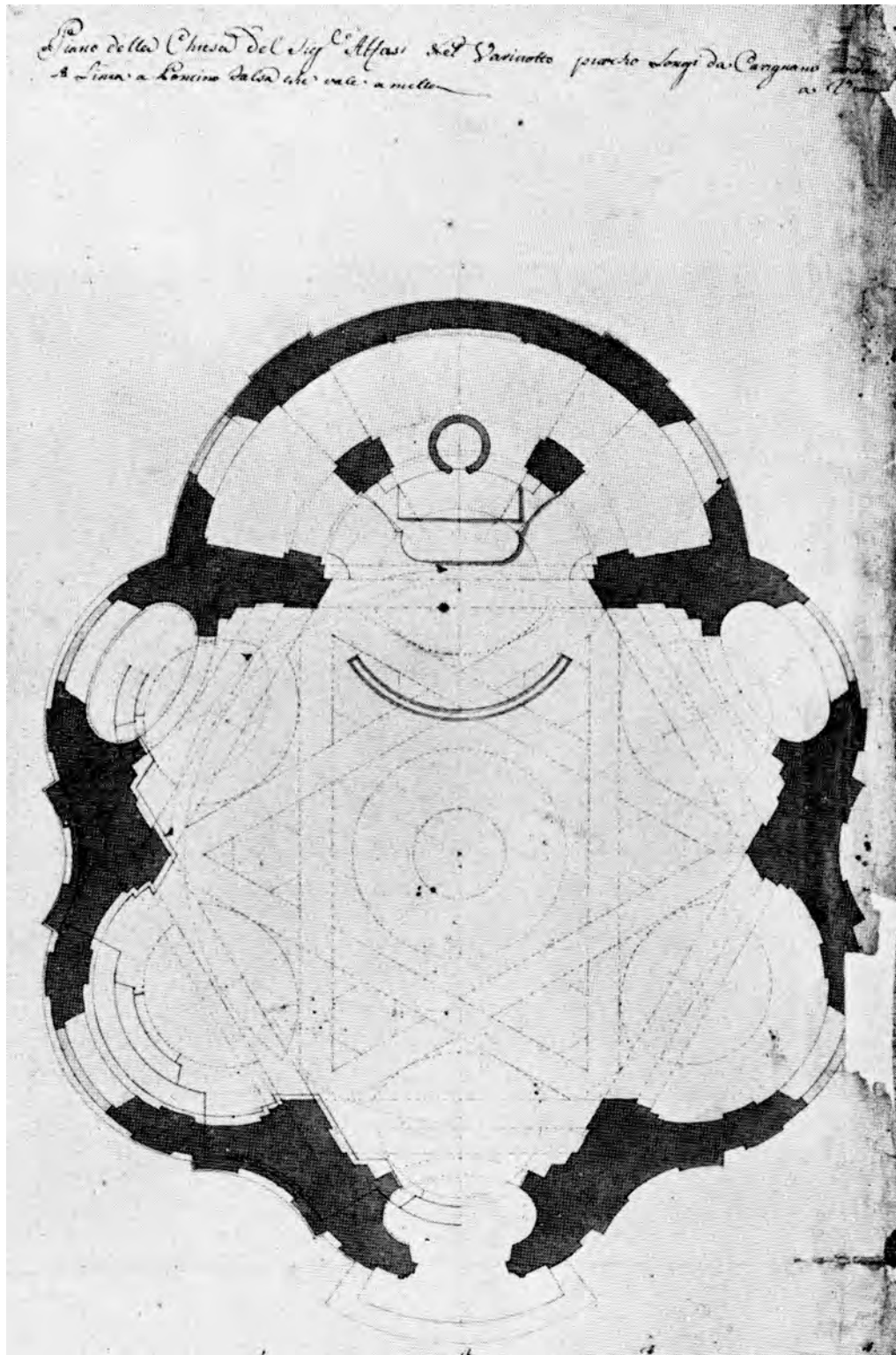


Figure 4.39. Vittone, Santa Maria della Visitazione, Vallinotto, 1738-39, plan (Turin, Museo Civico, Vandone Collection).

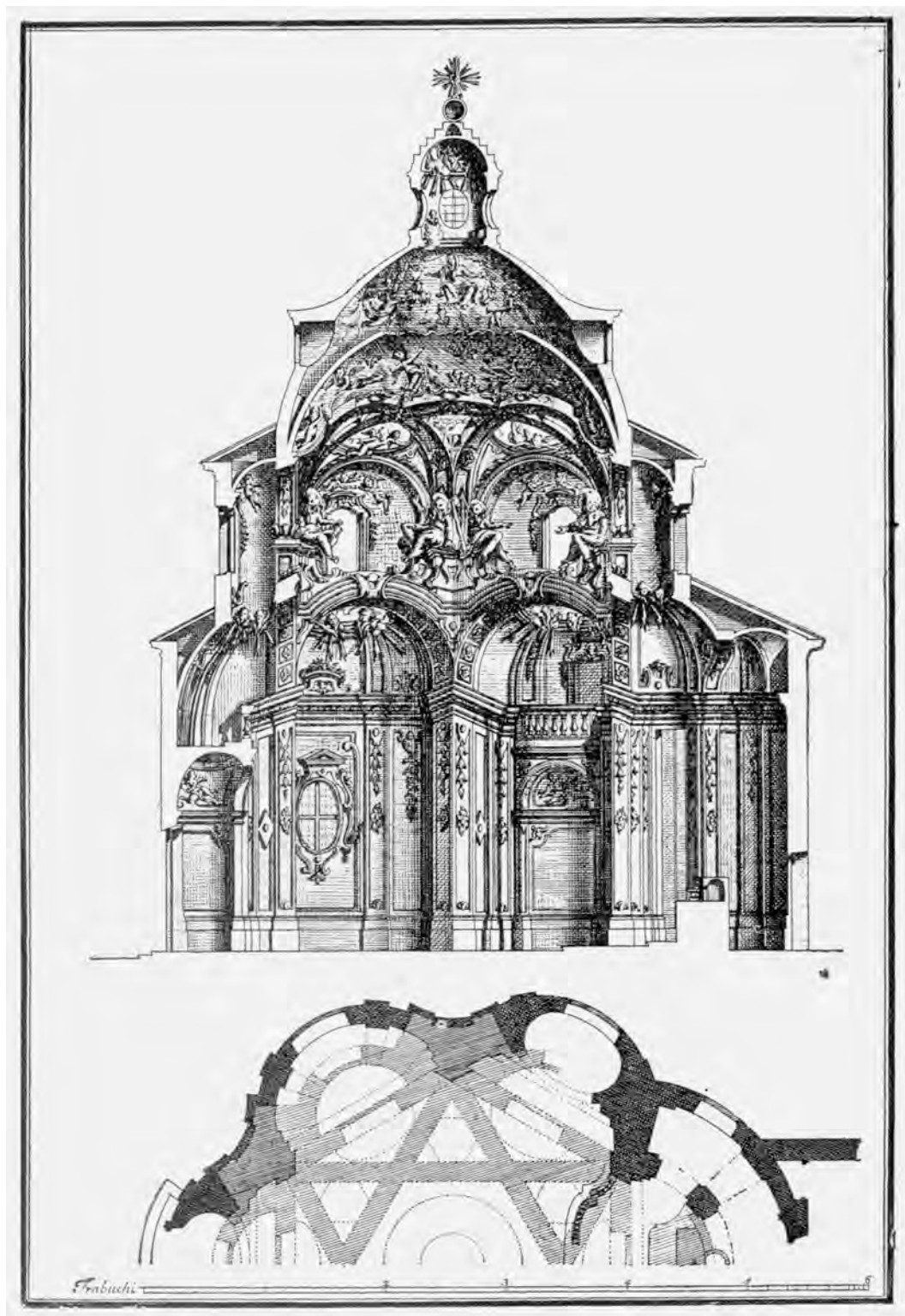


Figure 4.40. Vittone, Santa Maria della Visitazione, Vallinotto, 1738-39, section and half-plan (*Istruzioni diverse*, pl. 78).



Figure 4.41. Vittone, Santa Maria della Visitazione, Vallinotto, 1738-39, section (Turin, Museo Civico, Vandone Collection).



Figure 4.42. Vittone, Santa Maria della Visitazione, Vallinotto, 1738-39, dome.



Figure 4.43. Vittone, Santa Maria della Visitazione, Vallinotto, 1738-39, dome.



Figure 4.44. Vittone, Santa Maria della Visitazione, Vallinotto, 1738-39, exterior.



Figure 4.45. Vittone, Santa Maria della Visitazione, Vallinotto, 1738-39, original dome.



Figure 4.46. Vittone, Santa Maria della Visitazione, Vallinotto, 1738-39, confessional.

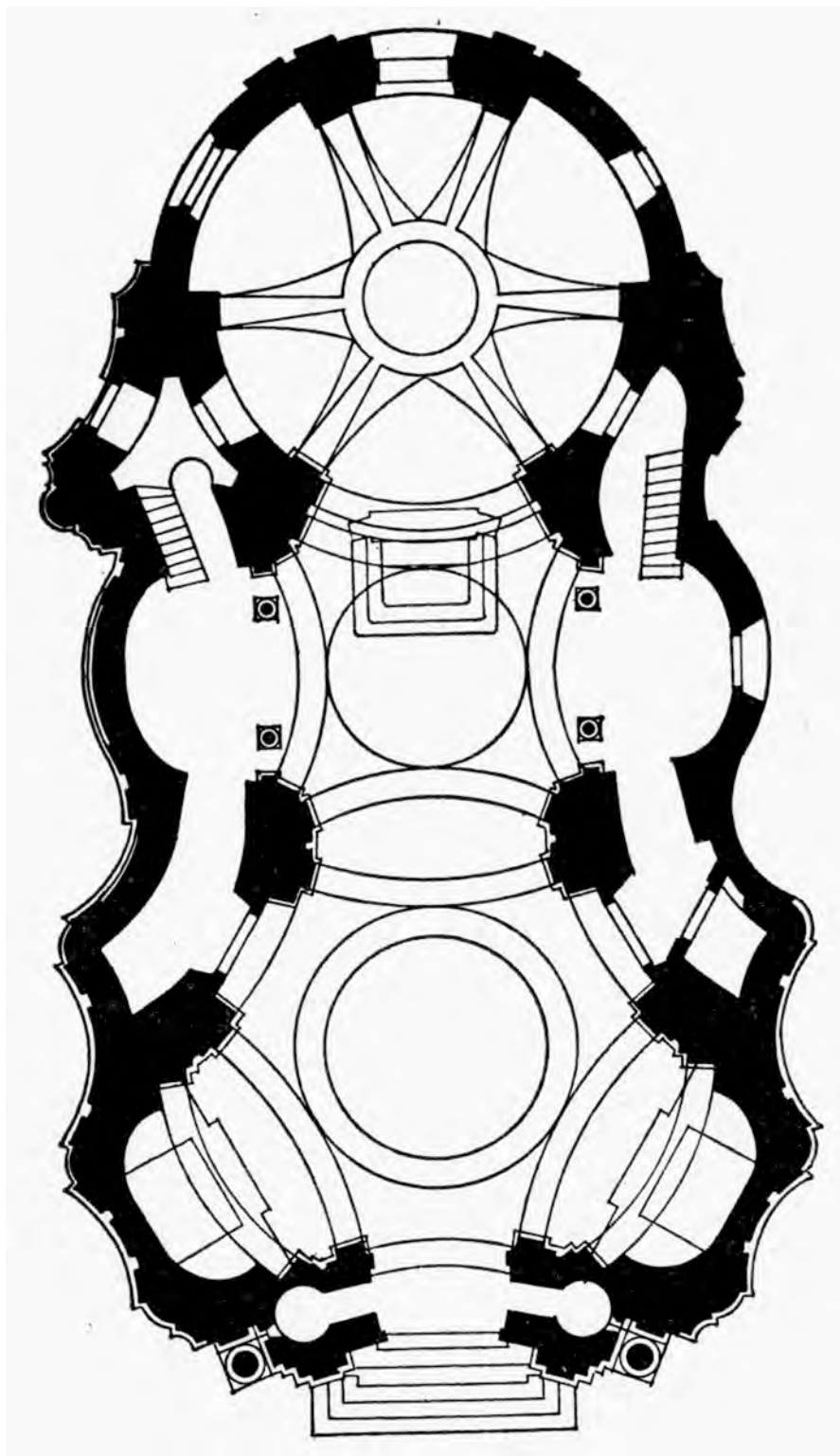


Figure 4.47. Michela, Santa Marta, Agliè, 1739, plan.

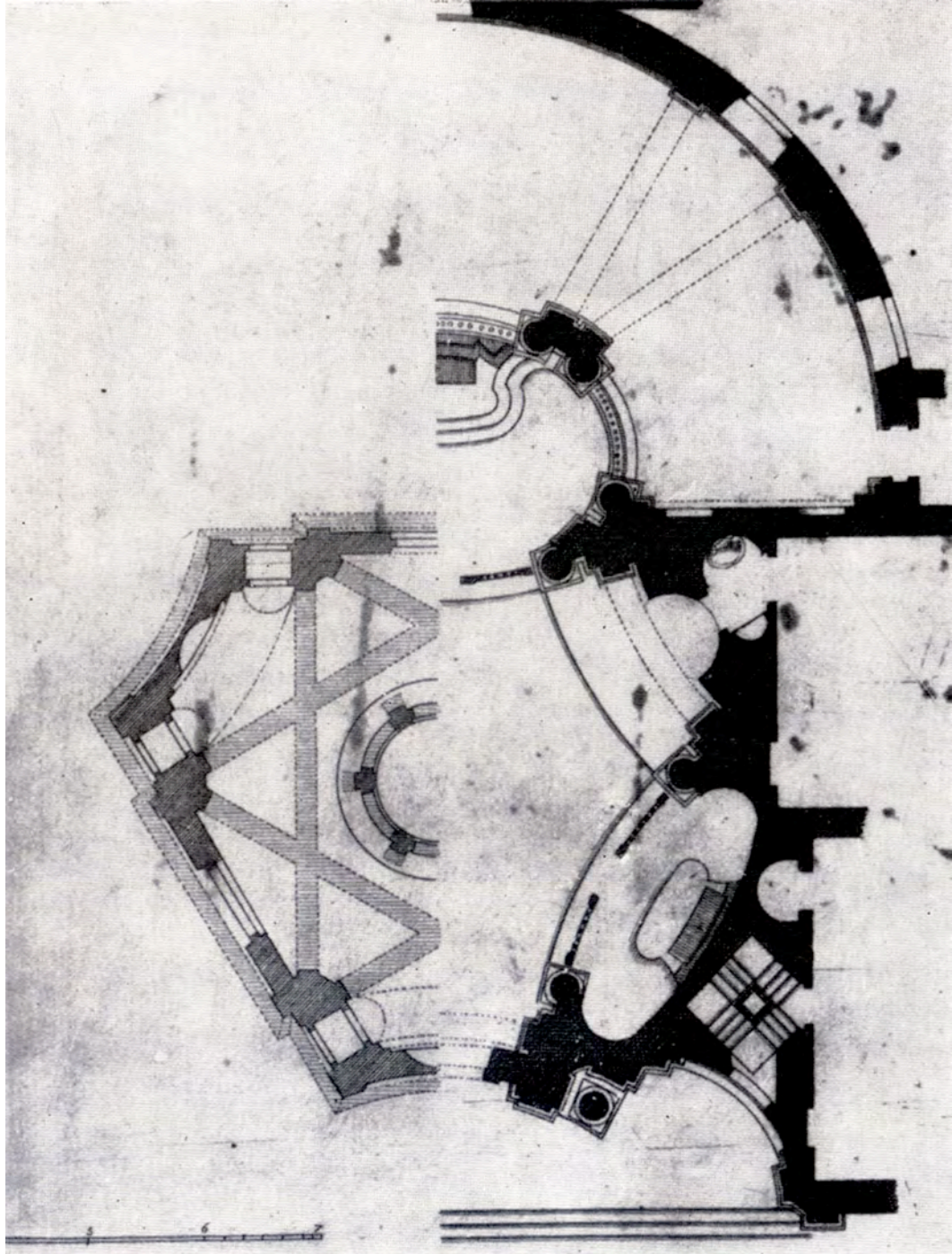


Figure 4.48. Vittone, Project for Santa Chiara, Alessandria, plan (*Istruzioni diverse*, pl. 71).

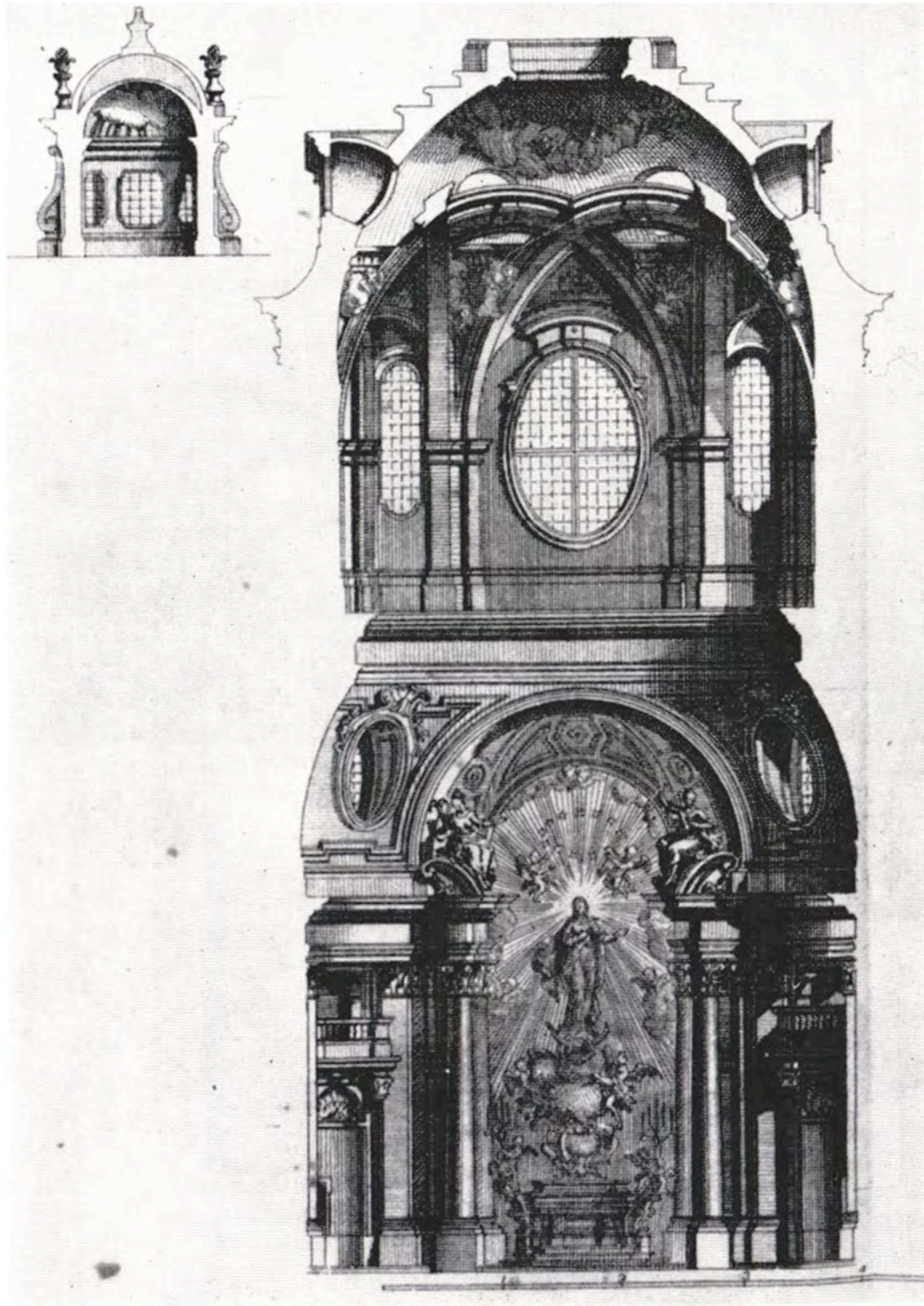


Figure 4.49. Vittone, Project for Santa Chiara, Alessandria, section (*Istruzioni diverse*, pl. 71).

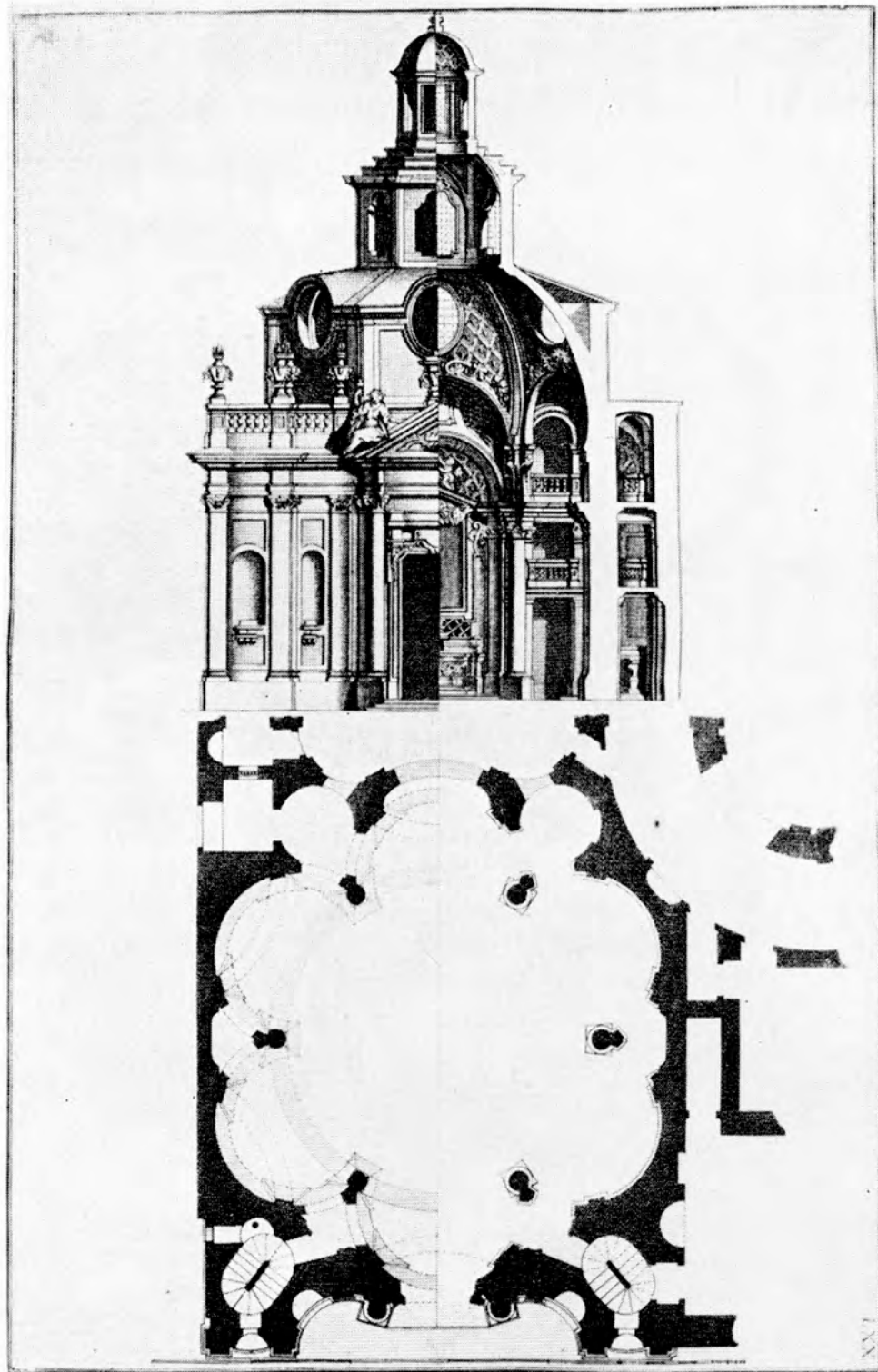


Figure 4.50. Vittone, Project for Santa Chiara, Turin, 1742, elevation-section and plan (*Istruzioni diverse*, pl. 70).

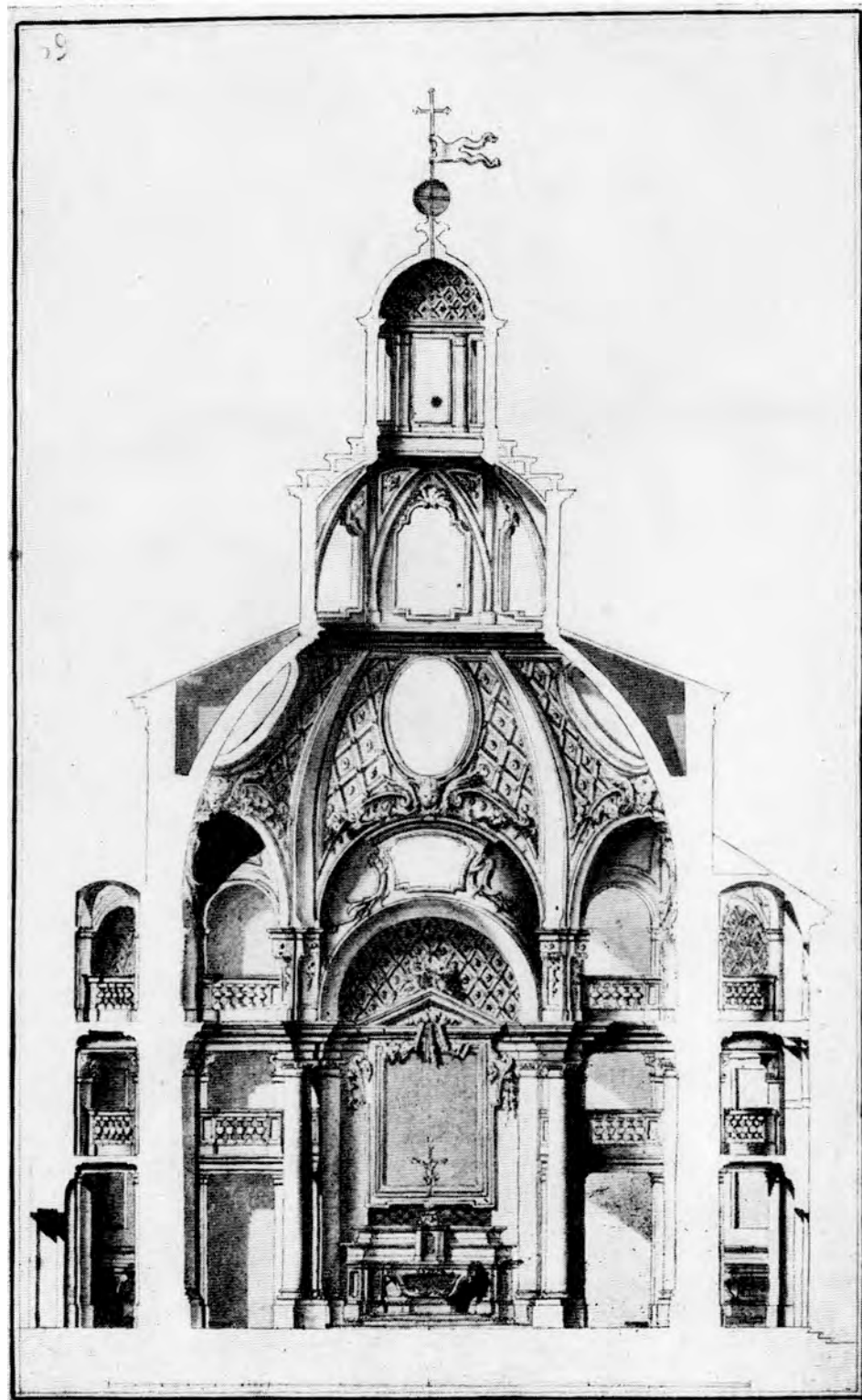


Figure 4.51. Vignola, Project for Santa Chiara, Turin, 1742, section (Turin, Archivio di Torino).

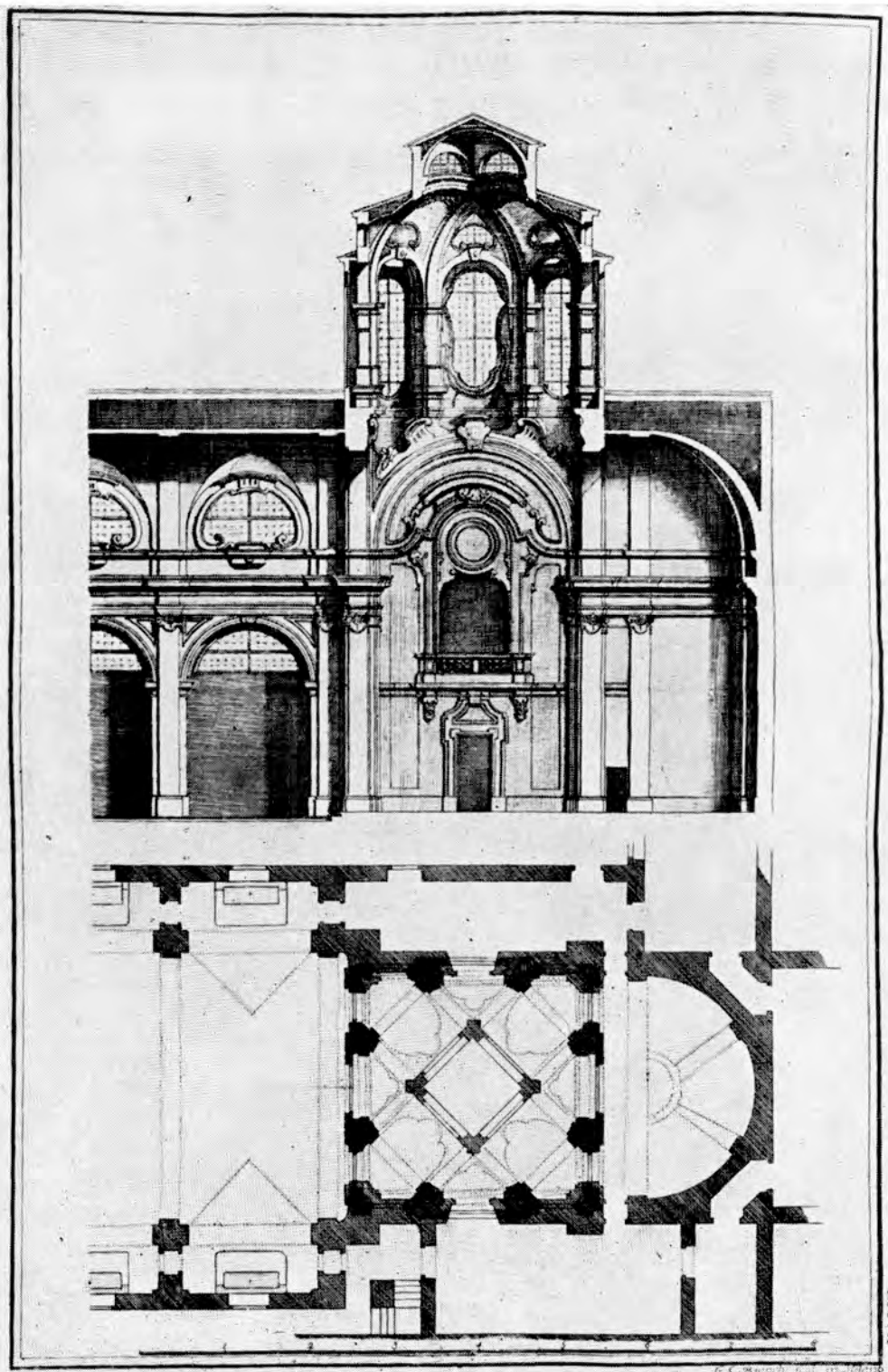


Figure 4.52. Vittone, Sant'Antonio Abate, Turin, ca. 1750 (demolished 1830), section and plan (*Istruzioni diverse*, pl. 67).

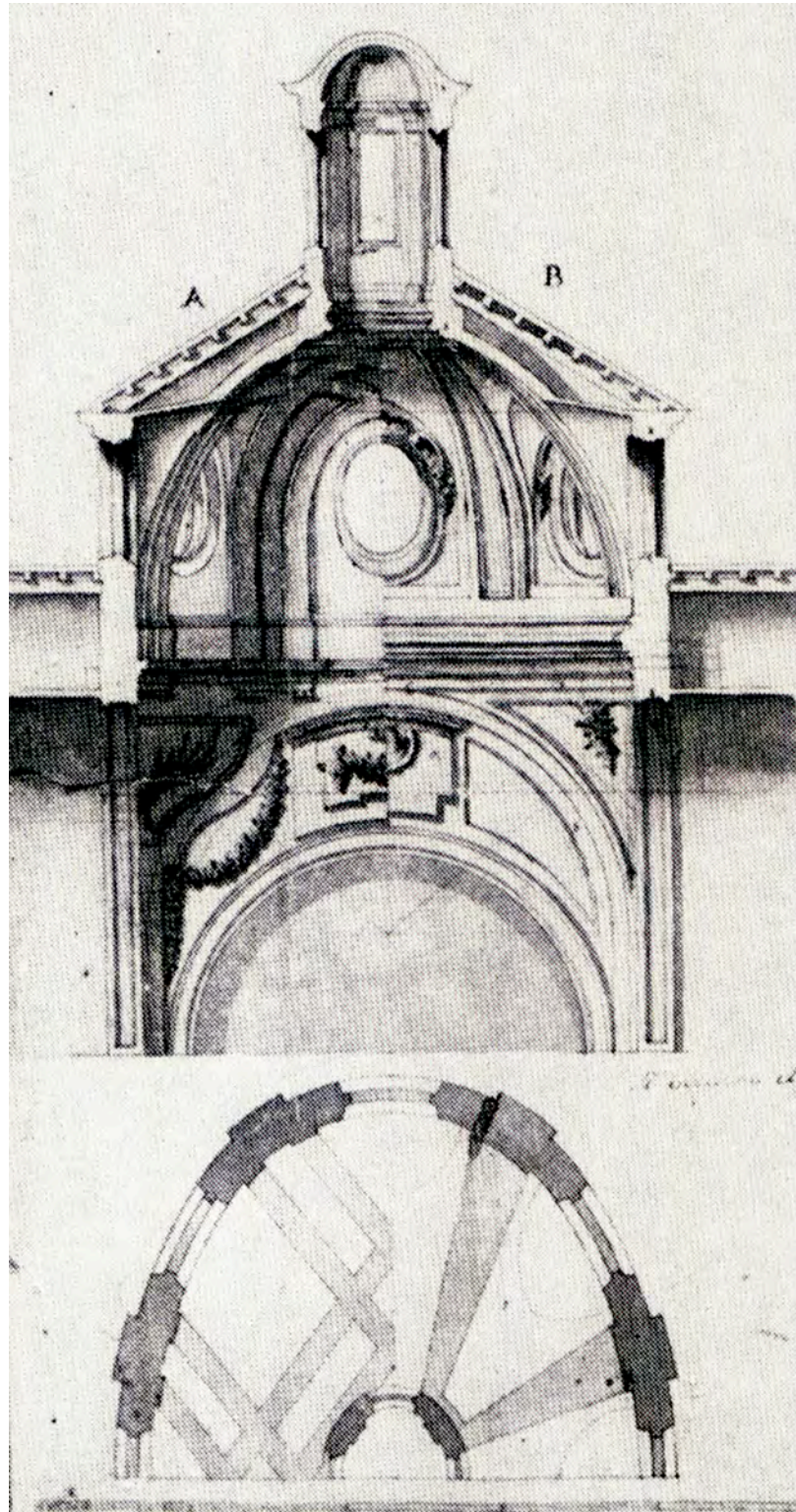


Figure 4.53. Vittone, Project for San Germano, San Germano Vercellese, *ca.* 1759, section and half-plan (San Germano Vercellese, Archivio parrocchiale).

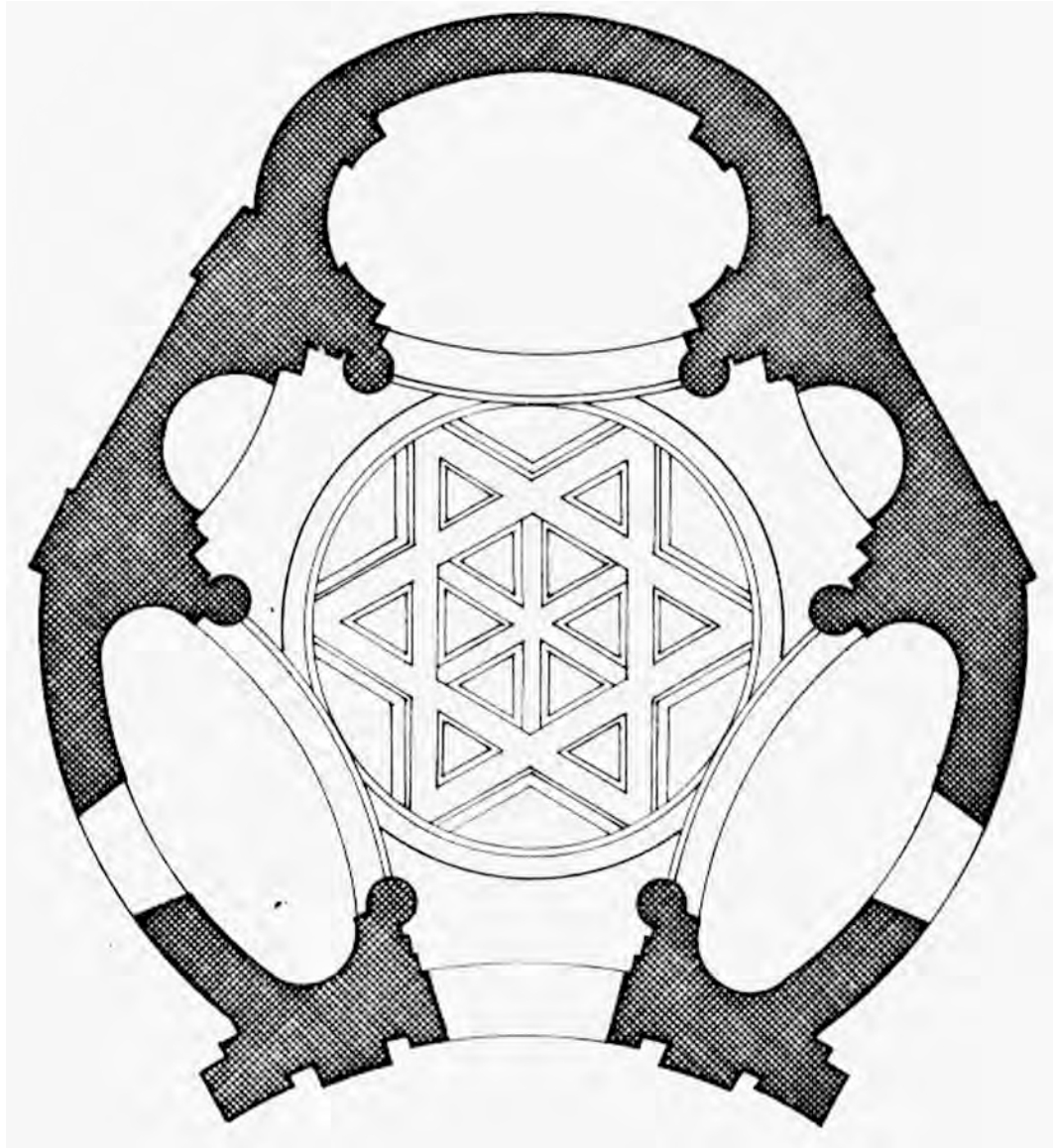


Figure 4.54. Vittone, San Luigi Gonzaga, Corterano Monferrato, 1760, plan.



Figure 4.55. Vittone, San Luigi Gonzaga, Corterano Monferrato, 1760, exterior.



Figure 4.56. Vittone, San Luigi Gonzaga, Corterano Monferrato, 1760, dome.

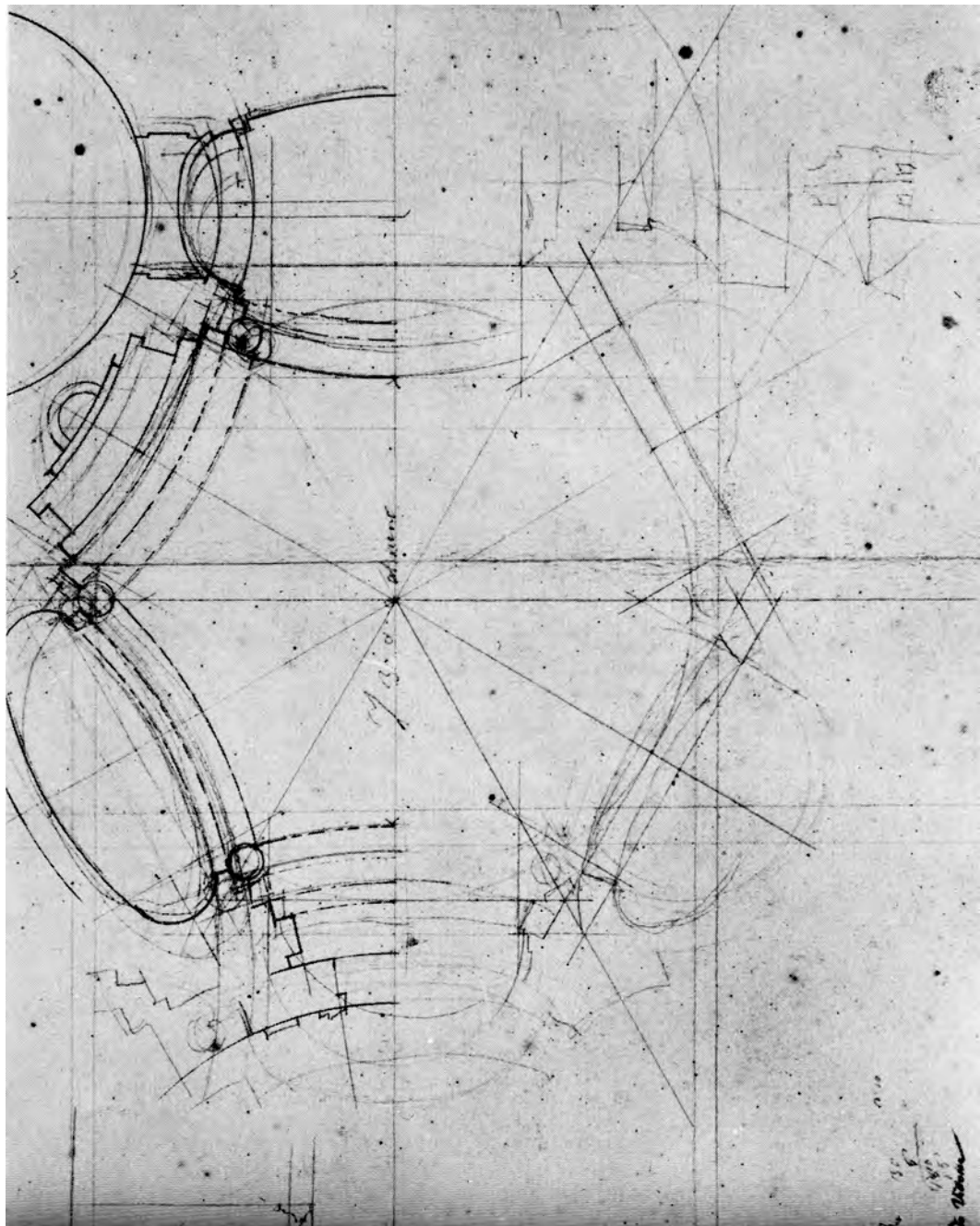


Figure 4.57. Vittone, Santa Chiara, Vercelli, *ca.* 1754, schematic plan (Paris, Musée des Arts Décoratifs).

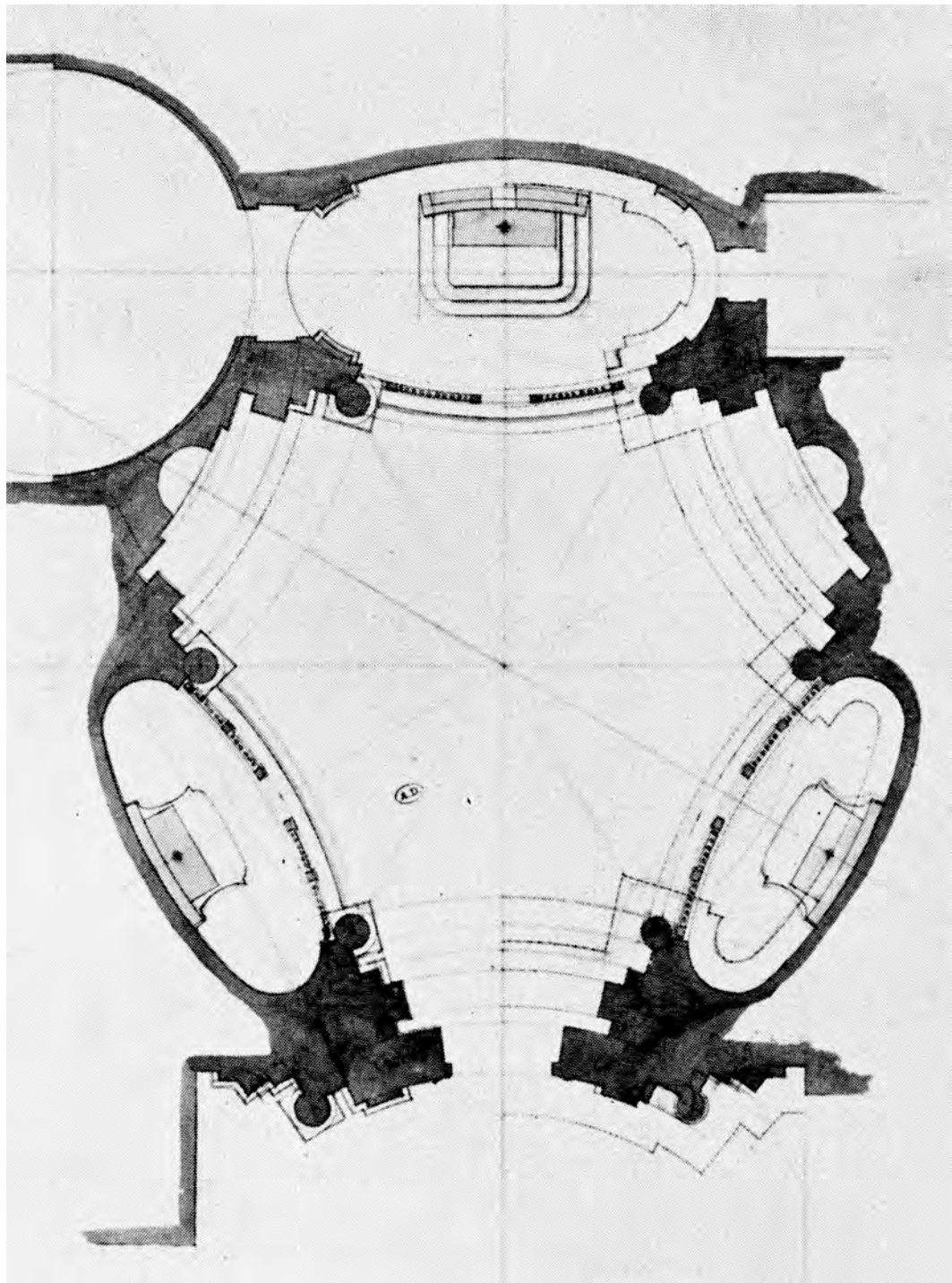


Figure 4.58. Vittone, Santa Chiara, Vercelli, *ca.* 1754, preliminary plan (Paris, Musée des Arts Décoratifs).

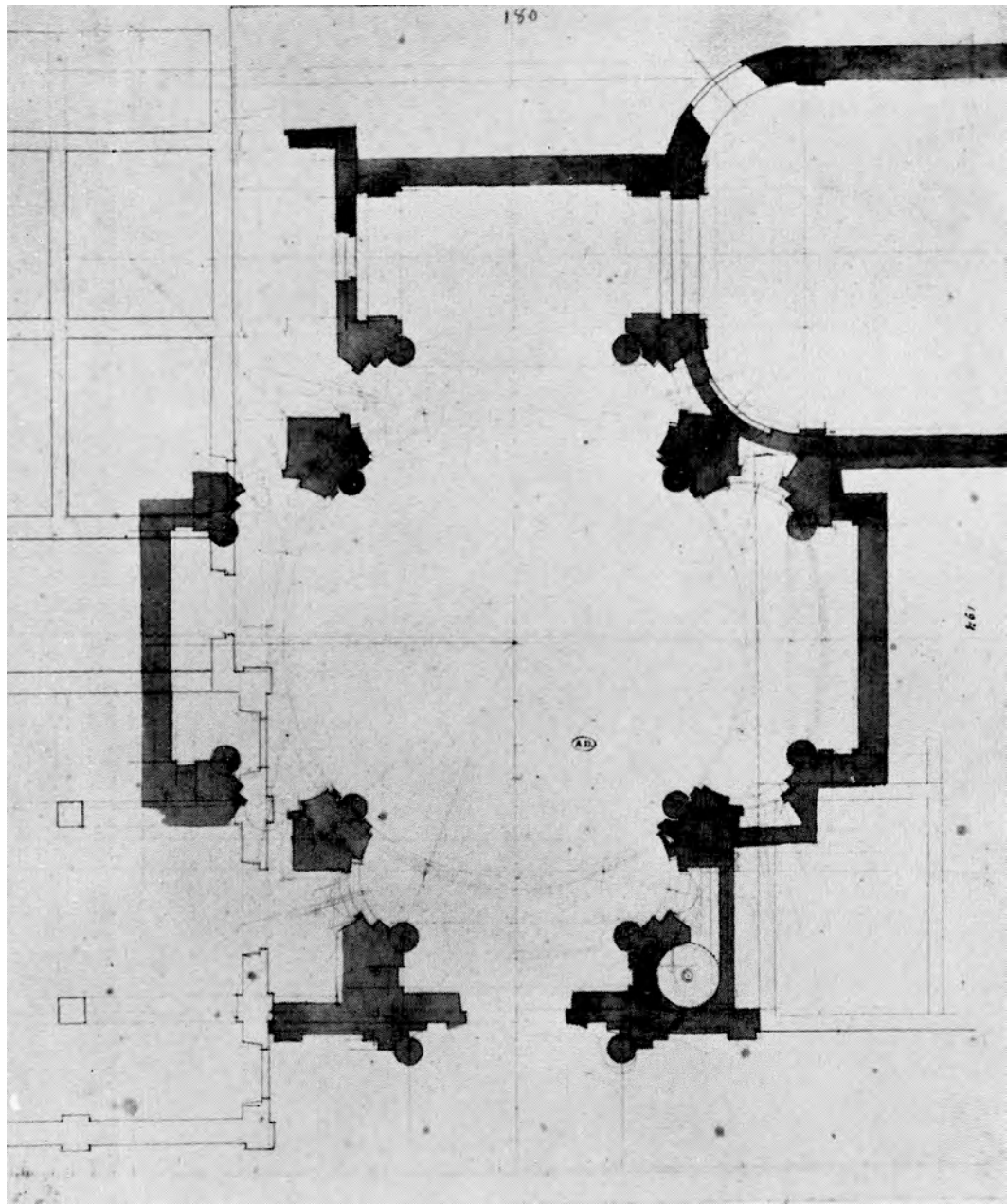


Figure 4.59. Vittone, Santa Chiara, Vercelli, *ca.* 1754, preliminary plan (Paris, Musée des Arts Décoratifs).

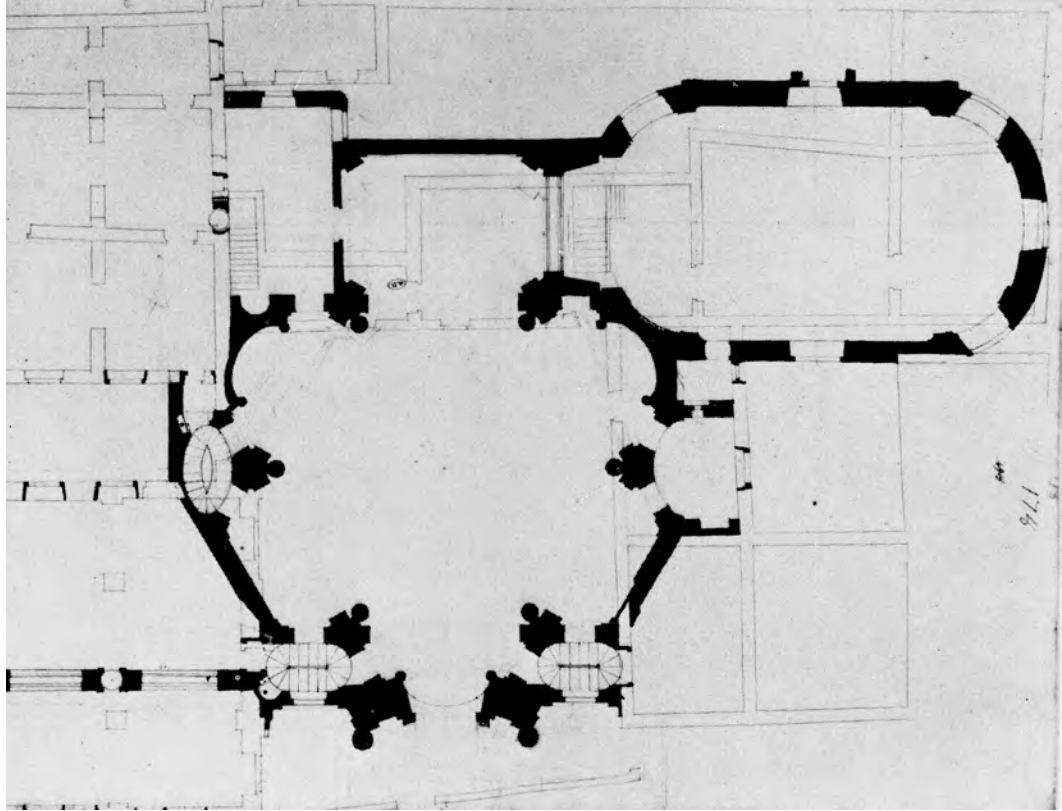


Figure 4.60. Vittone, *Santa Chiara, Vercelli, ca. 1754*, preliminary plan (Paris, Musée des Arts Décoratifs).

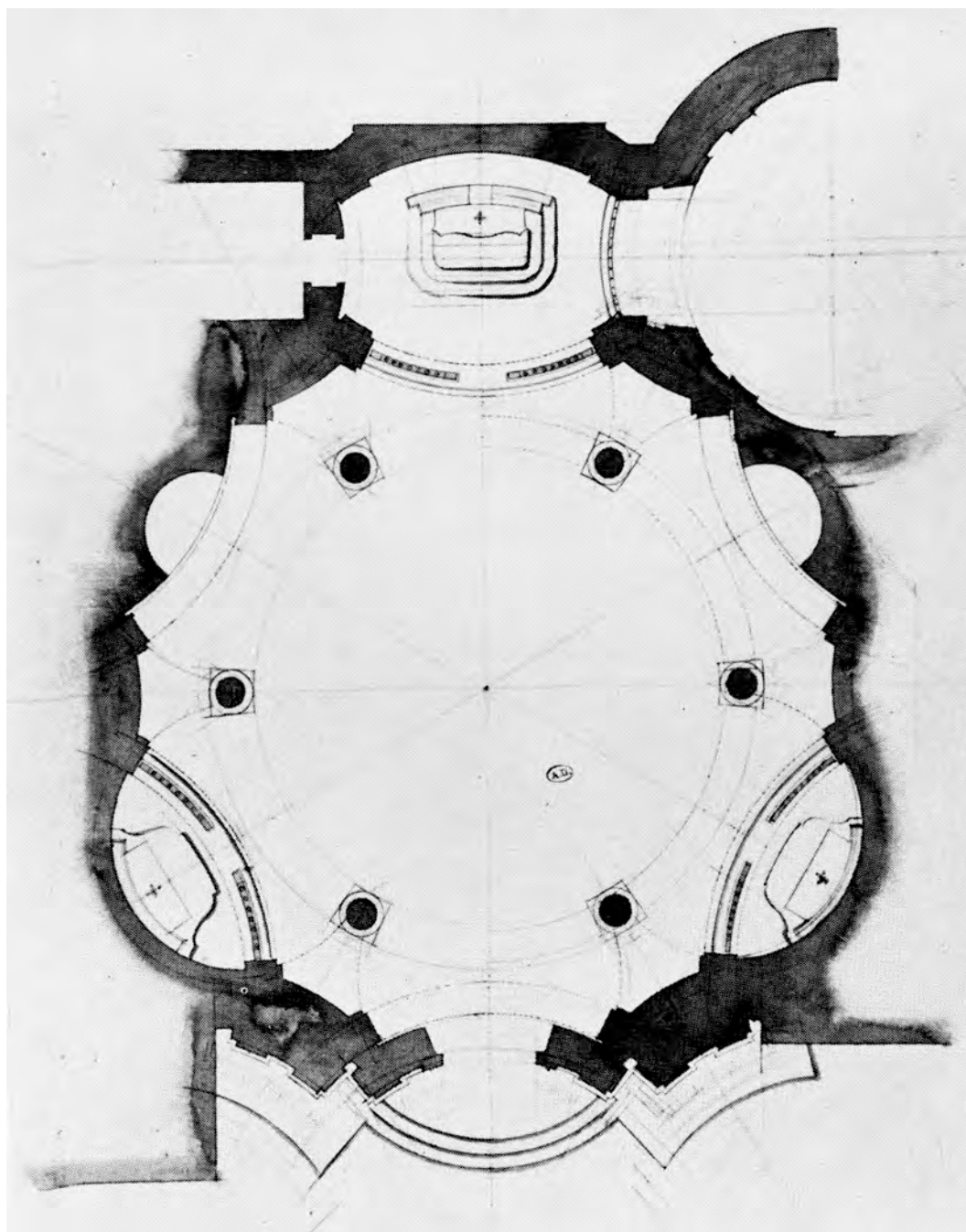


Figure 4.61. Vittone, Santa Chiara, Vercelli, *ca.* 1754, preliminary plan (Paris, Musée des Arts Décoratifs).

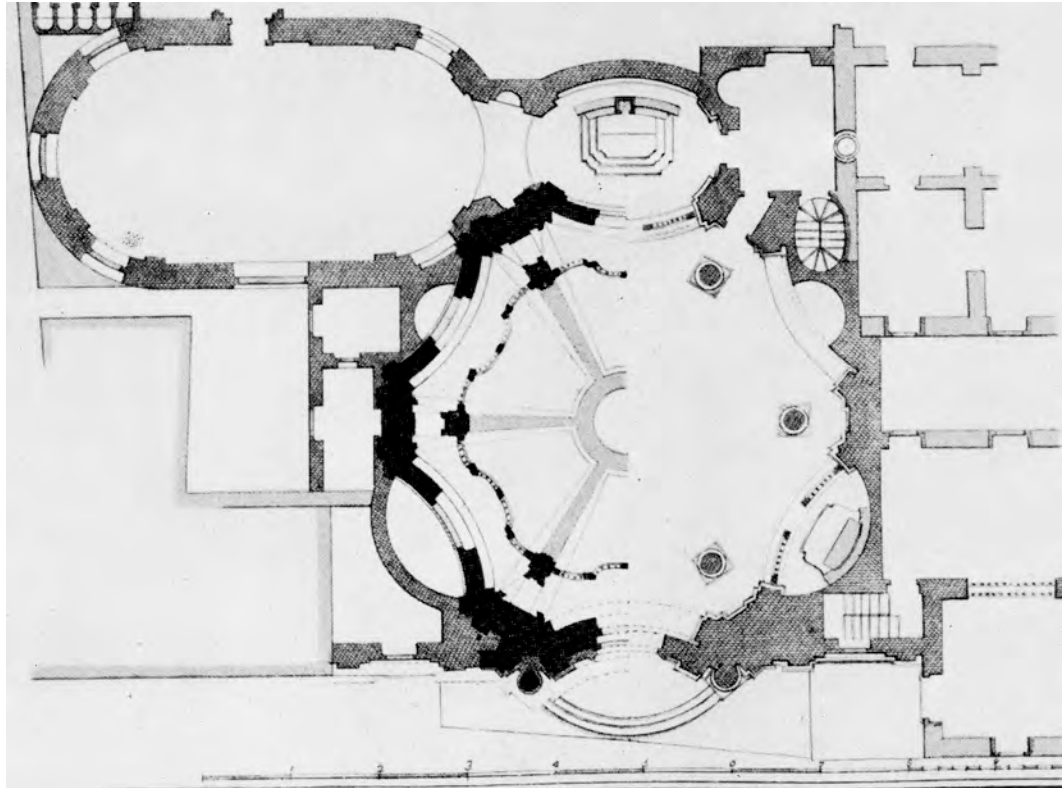


Figure 4.62. Vittone, Santa Chiara, Vercelli, *ca.* 1754-56, plan (*Istruzioni diverse*, pl. 72).

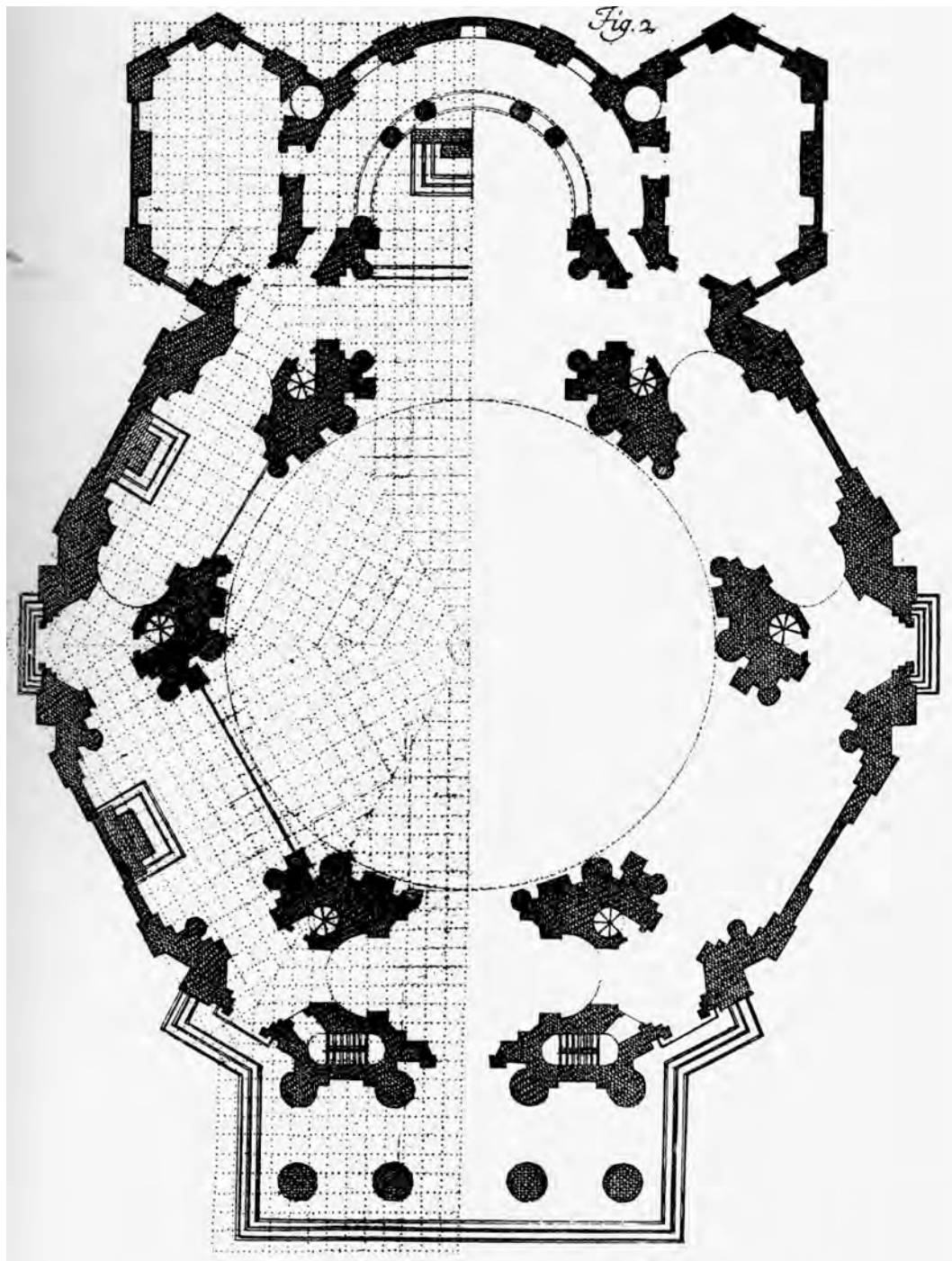


Figure 4.63. Vittone, Project for a Triangular-Hexagonal Temple, plan (*Istruzioni elementari*, pl. 80).

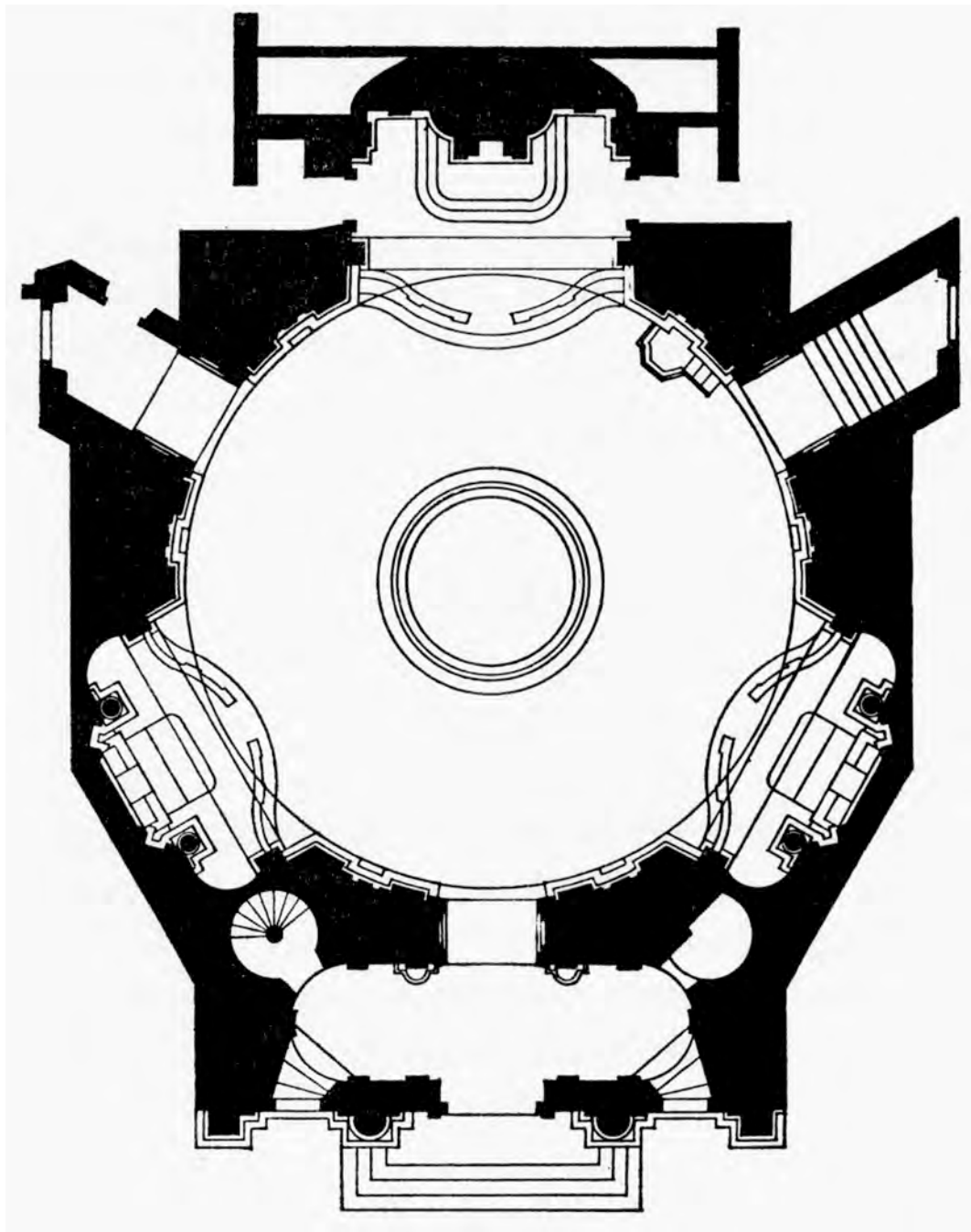


Figure 4.64. Vitozzi, Santissima Trinità, Turin, 1598-1661, plan.

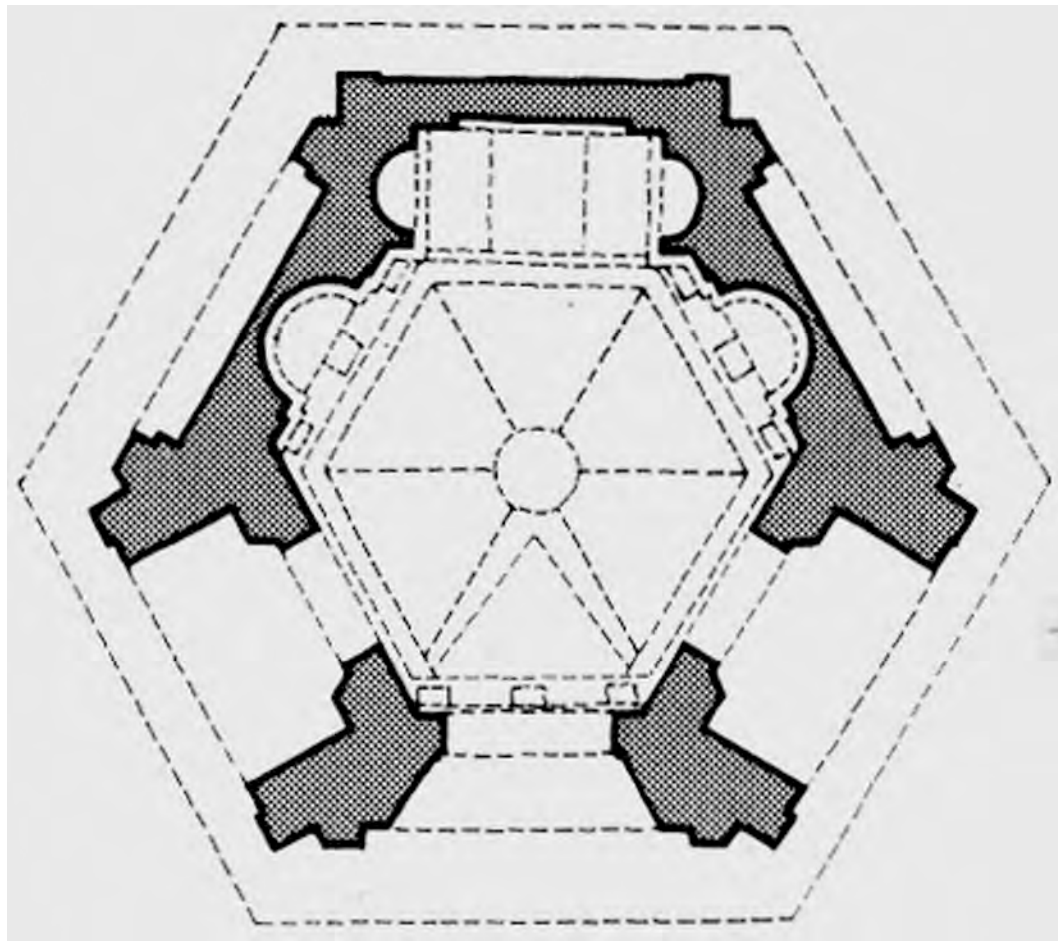


Figure 4.65. Guala, Oratory of San Bernardo, Frassinello Monferrato, after 1650, plan.

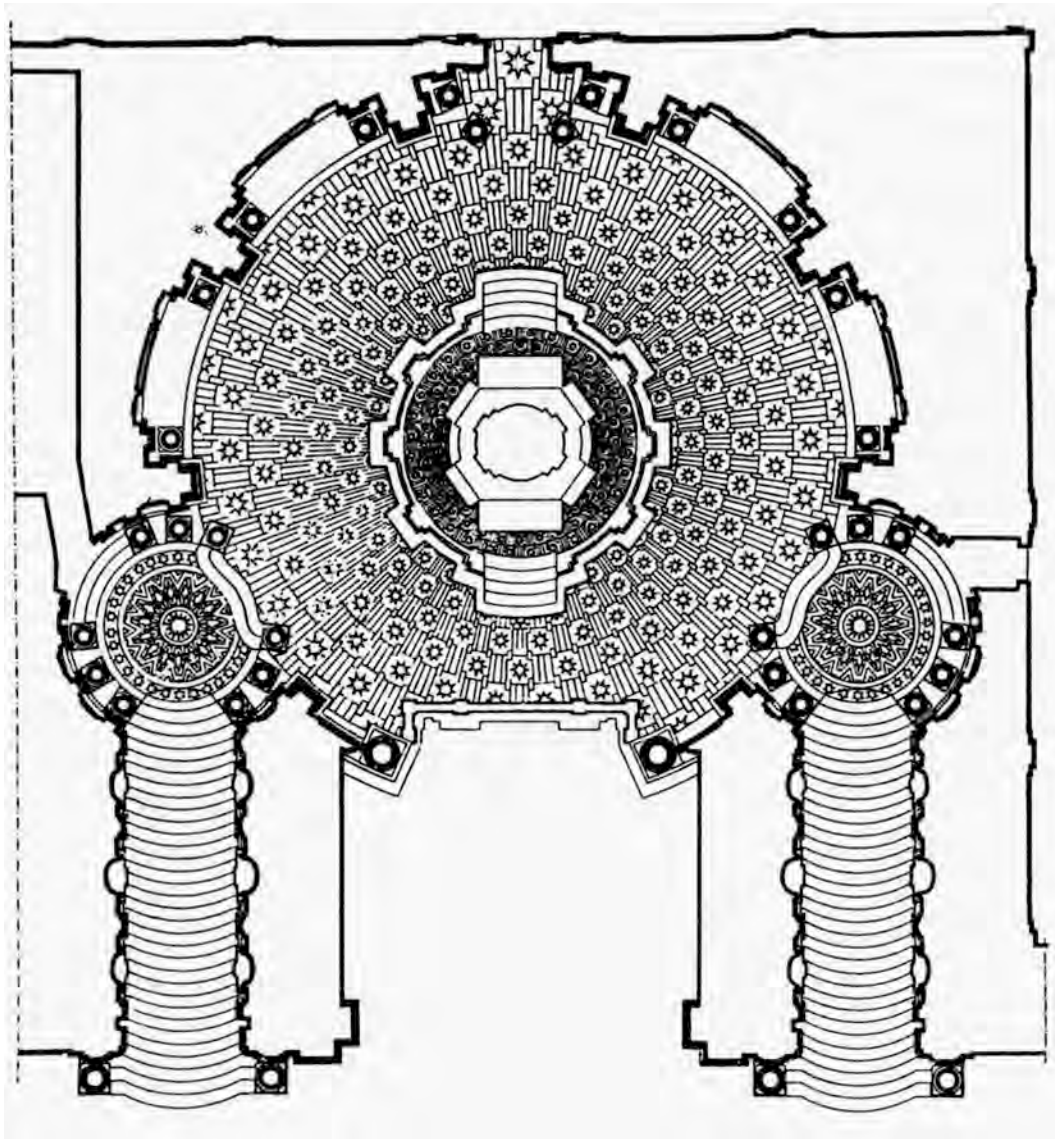


Figure 4.66. Guarini, Santissima Sindone, Turin, 1667-94, plan
(*Architettura civile*).

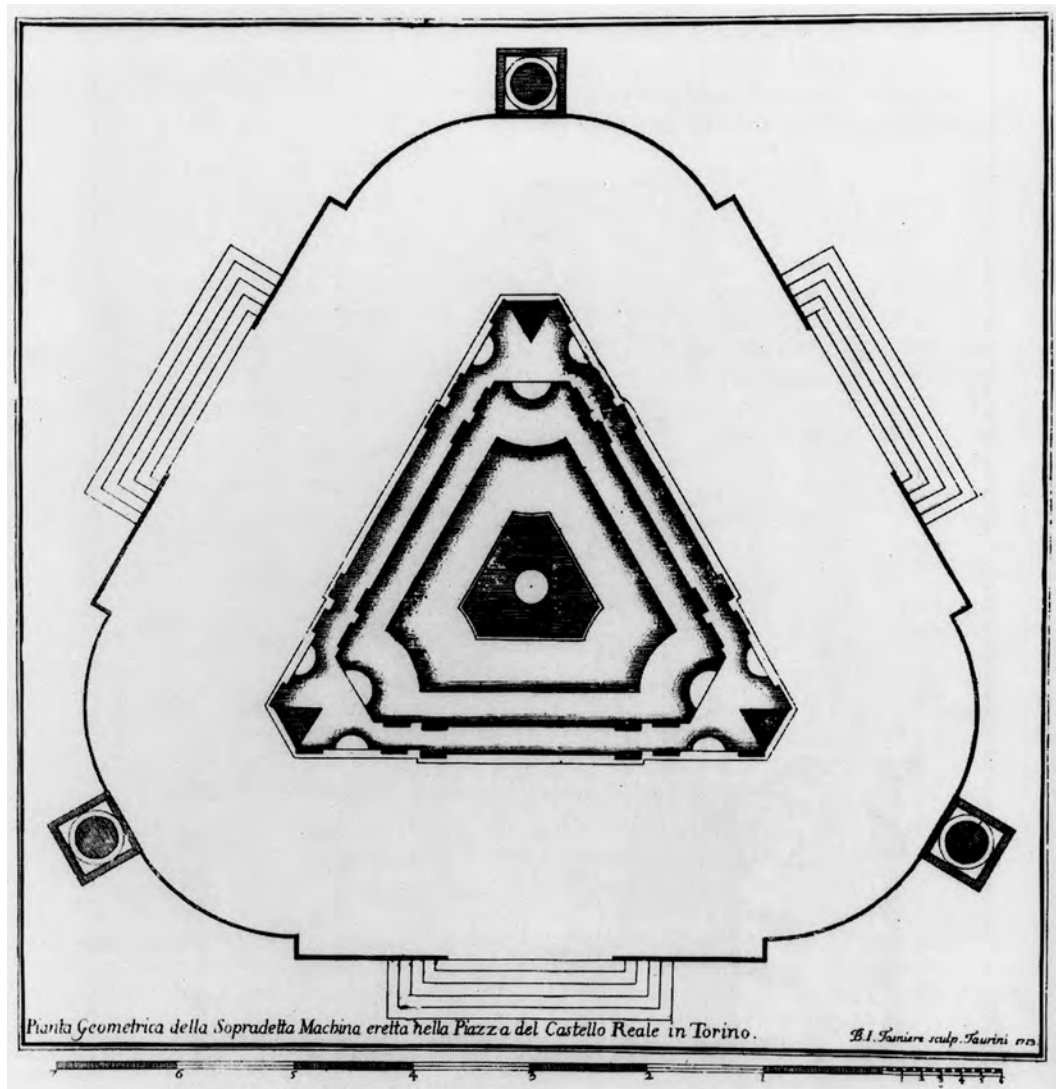


Figure 4.67. Plantery, Fireworks Machine, Turin, 1713, plan.

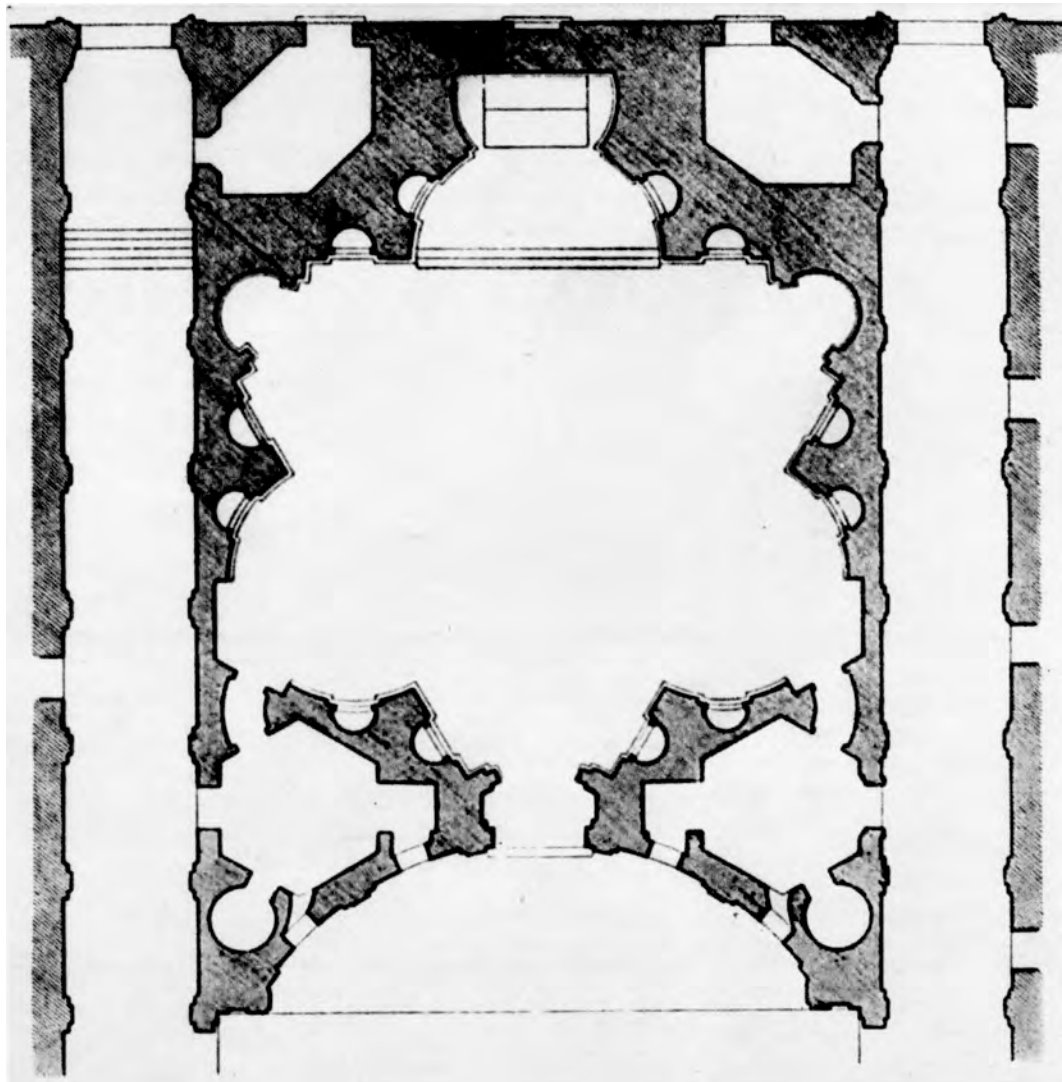


Figure 4.68. Borromini, Sant'Ivo alla Sapienza, Rome, 1642-50, plan.

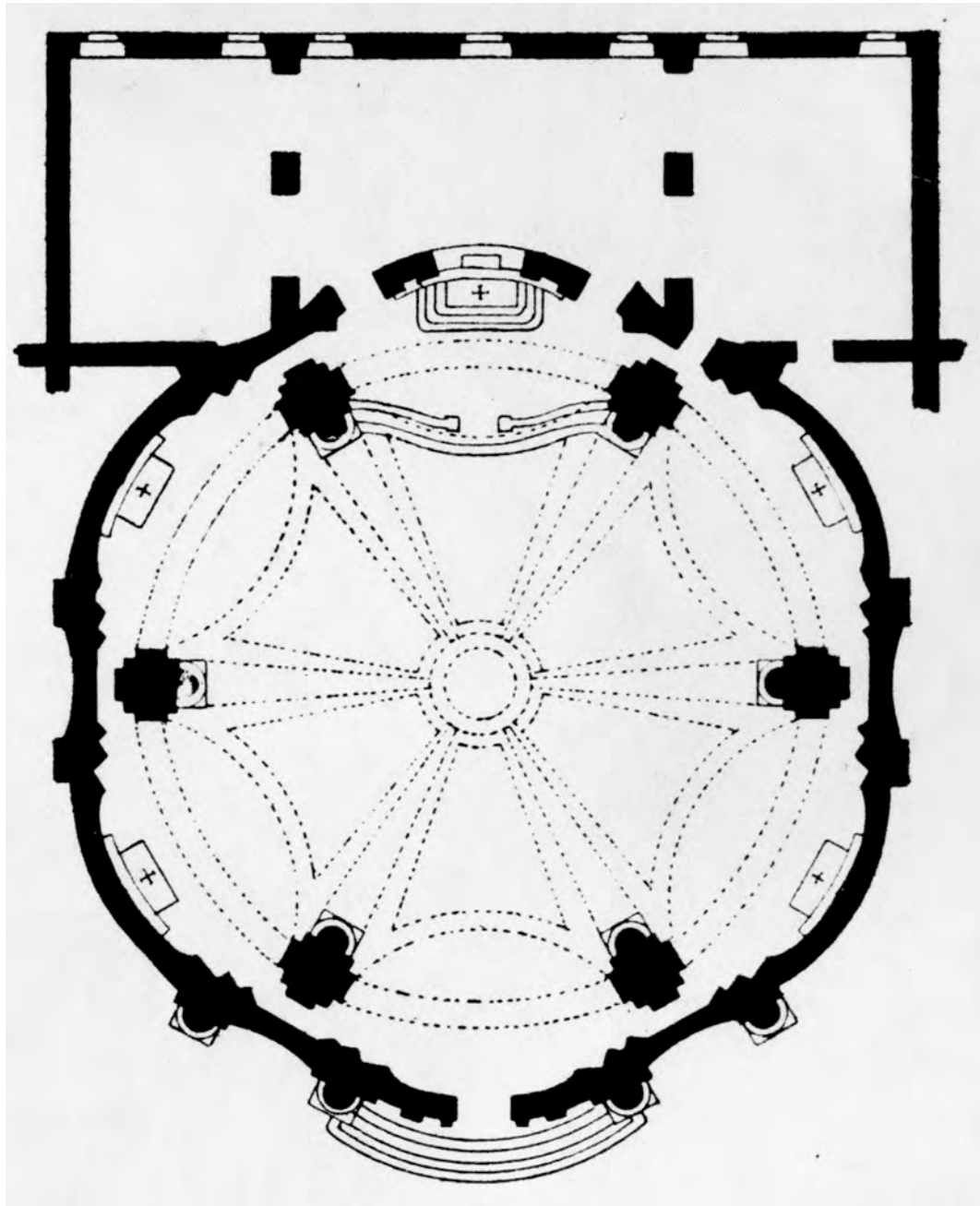


Figure 4.69. Vittone, San Michele, Borgo d'Ale, 1770-80, plan.

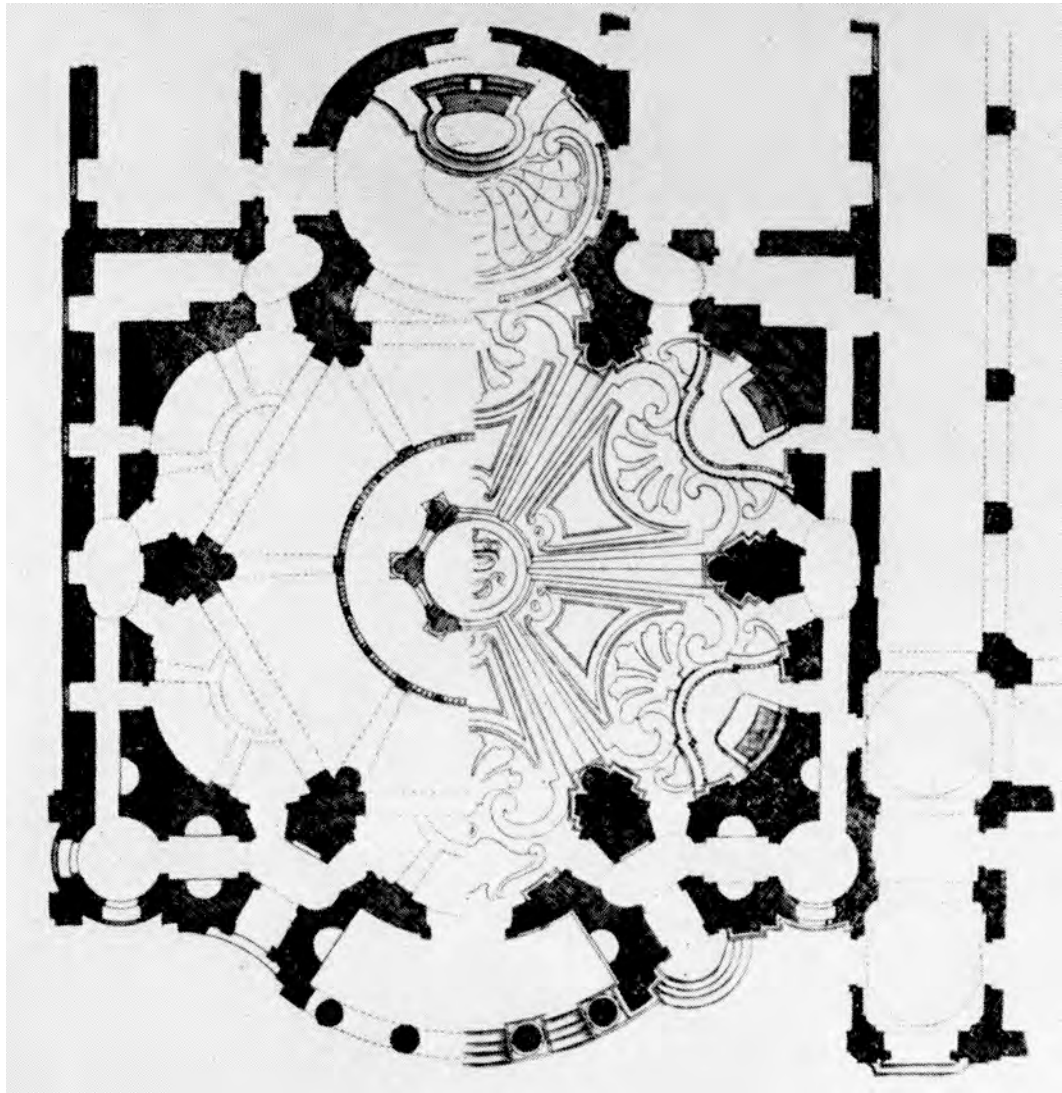


Figure 4.70. Vittone, Project for the Church of the Chierici Regolari Ministri degli Infermi, Turin, ca. 1750, plan (*Istruzioni diverse*, pl. 55).

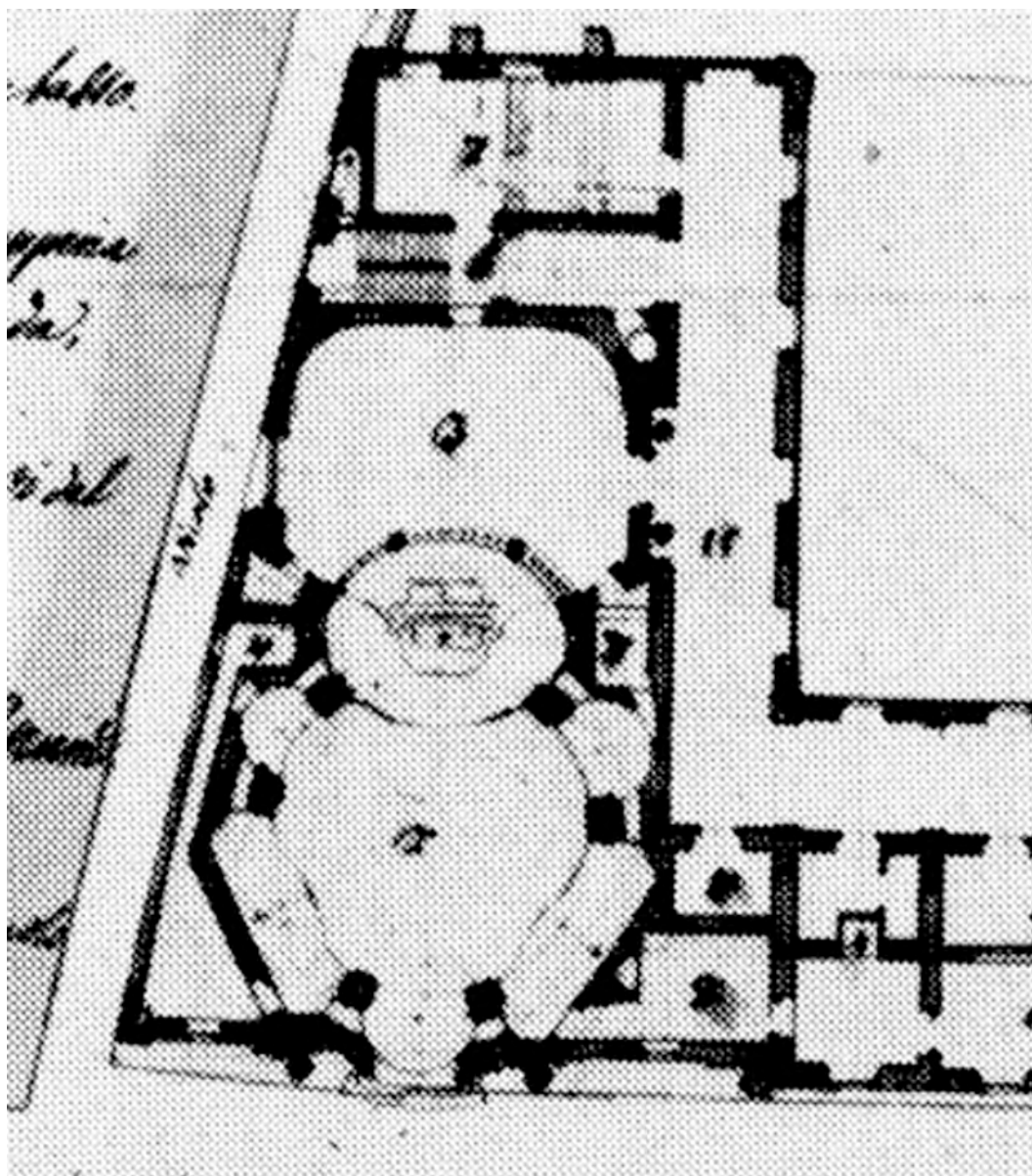


Figure 4.71. Vittone, Project for Santa Maria Maddalena, Mondovì, 1749, plan (Turin, Museo Civico).

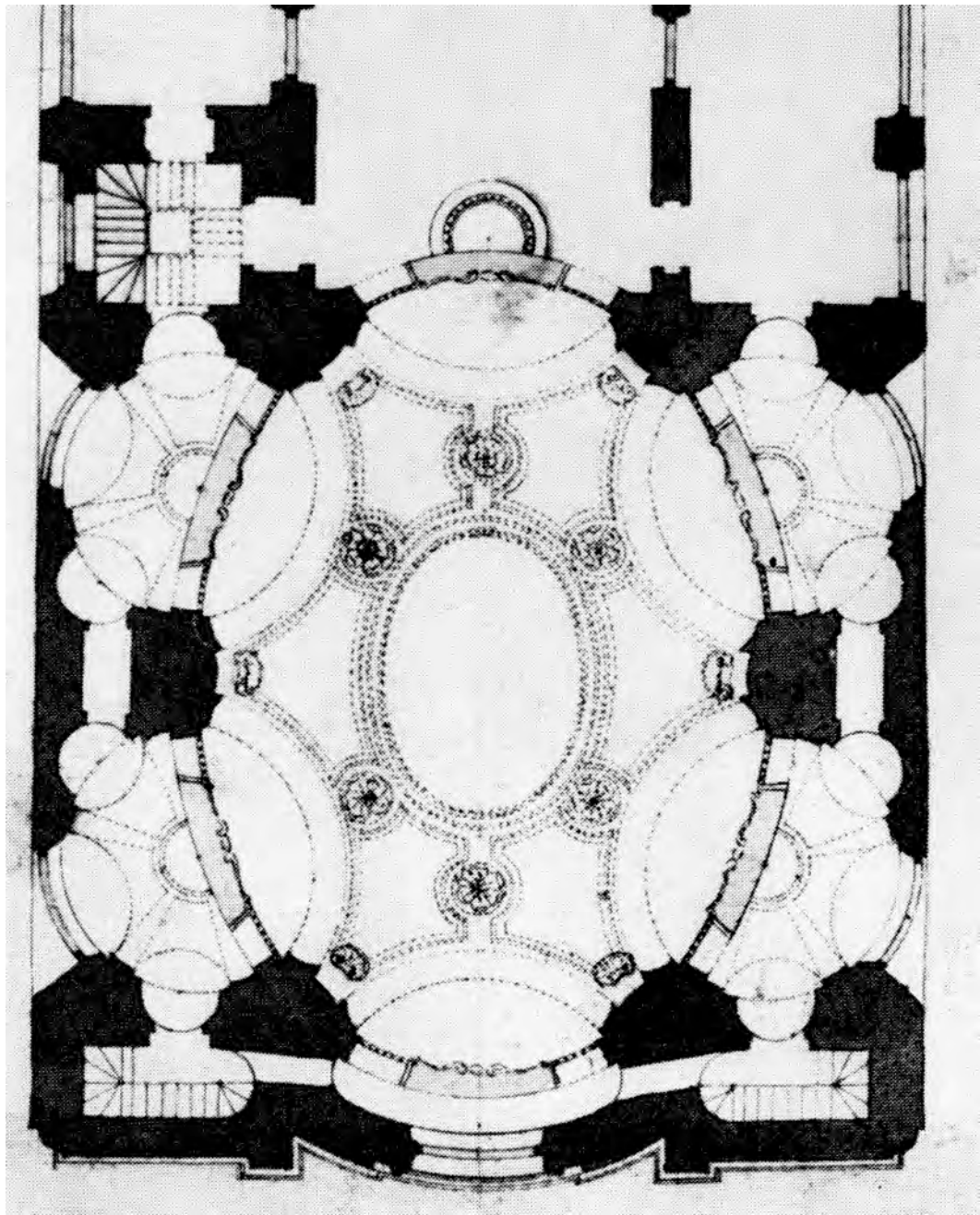


Figure 4.72. Vittone, San Gaetano, Nice, 1741-49, plan (*Istruzioni diverse*, pl. 48).

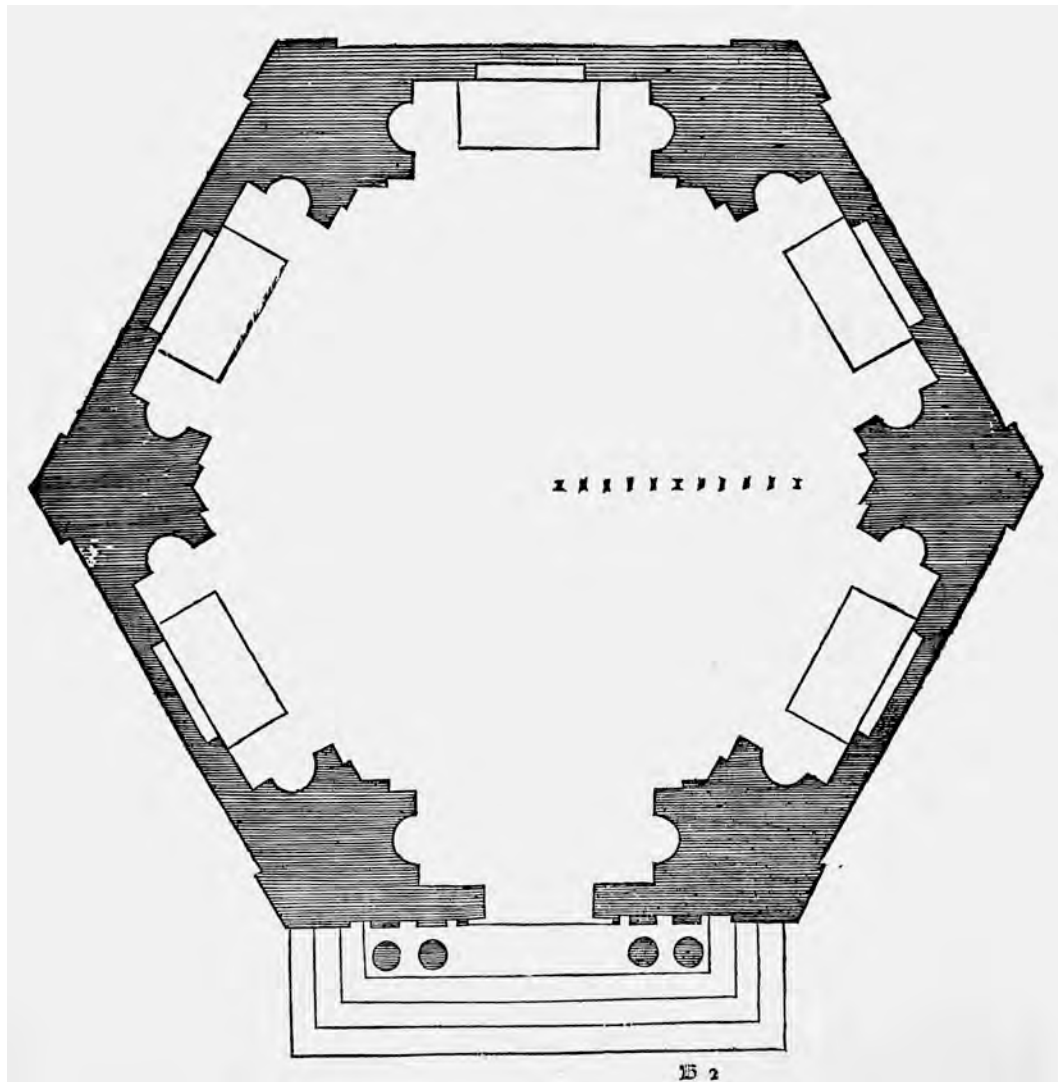


Figure 4.73. Serlio, Project for a Hexagonal Temple, plan (*Tutte l'opere d'architettura et prospettiva*, V, fol. 6).

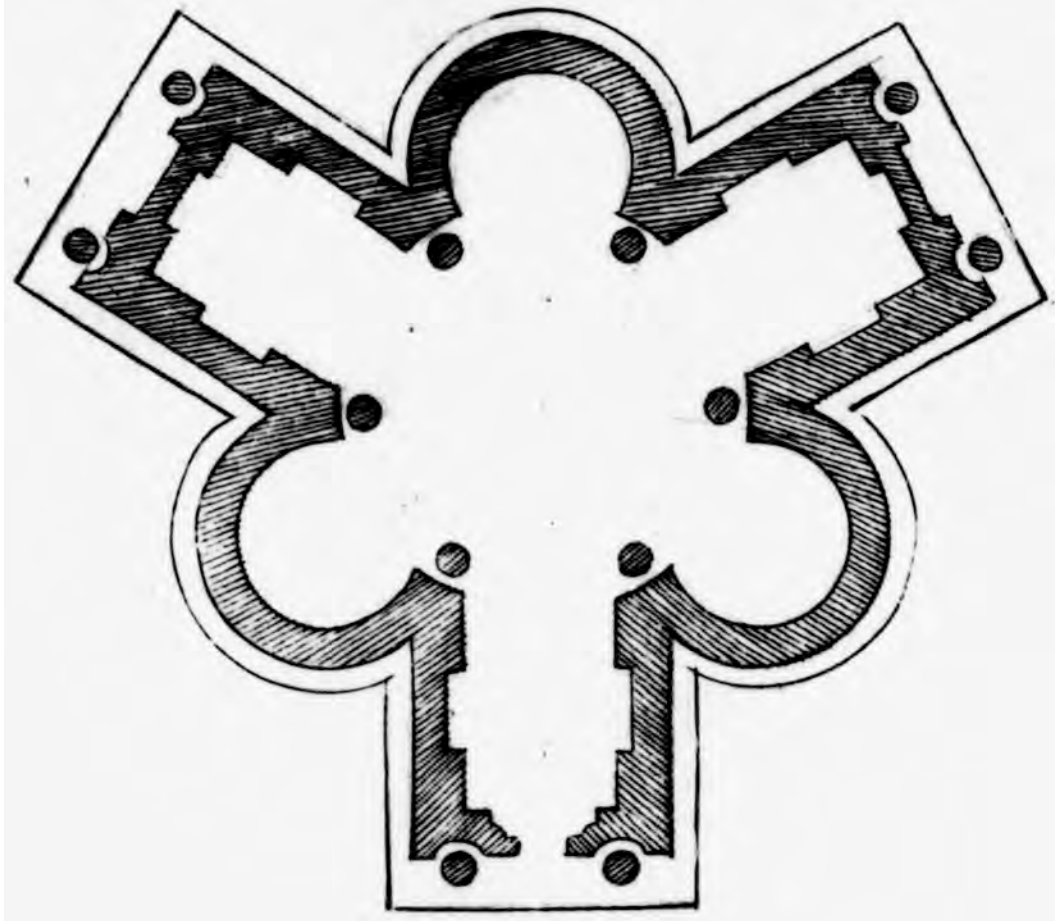


Figure 4.74. Montano, Reconstruction of an Ancient Temple, plan (*Li cinque libri*, III, pl. 17).

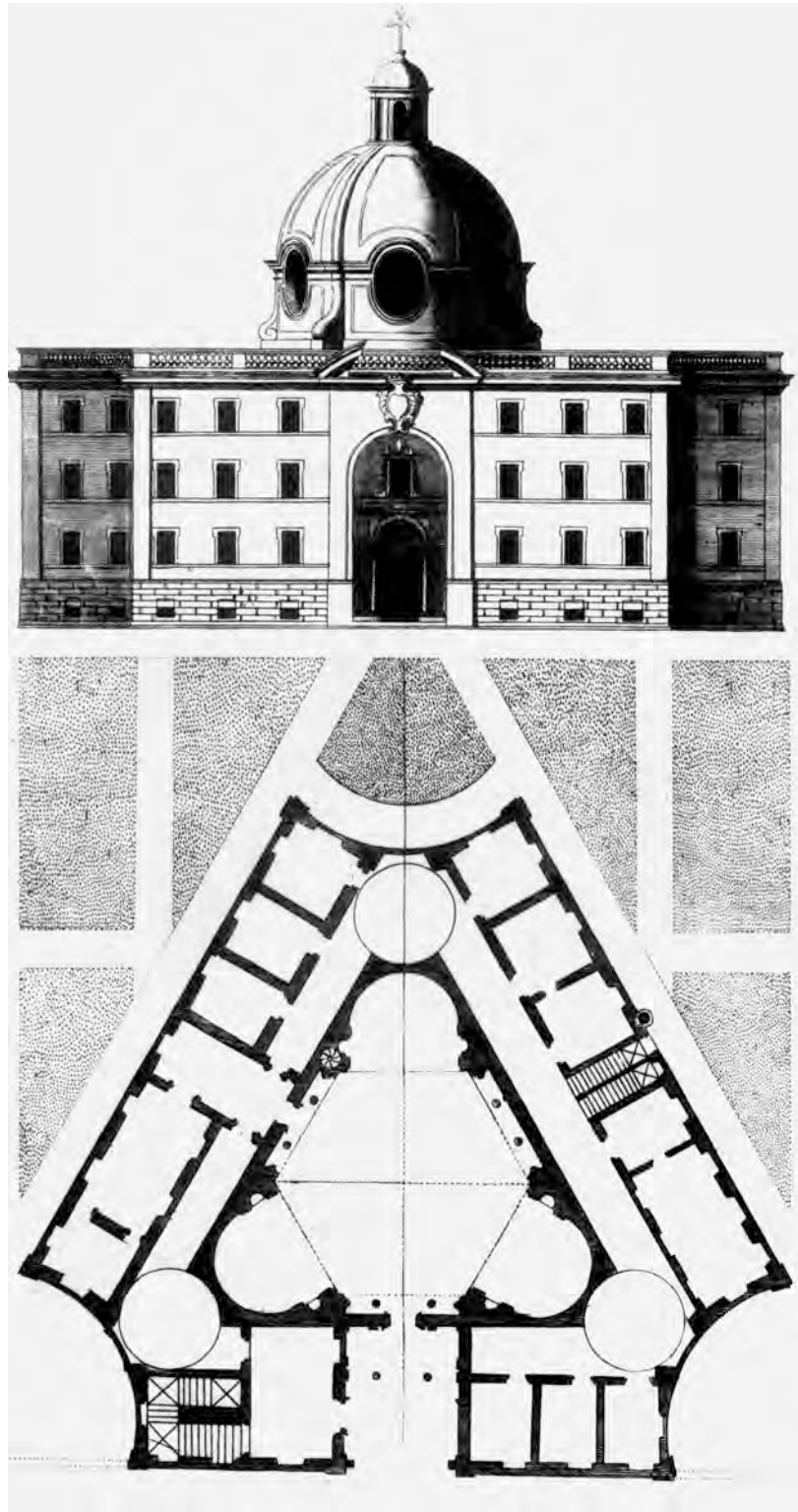


Figure 4.75. Pozzo, Project for a Triangular Church and College, plan and elevation (*Perspectiva Pictorum*, II, fig. 110).

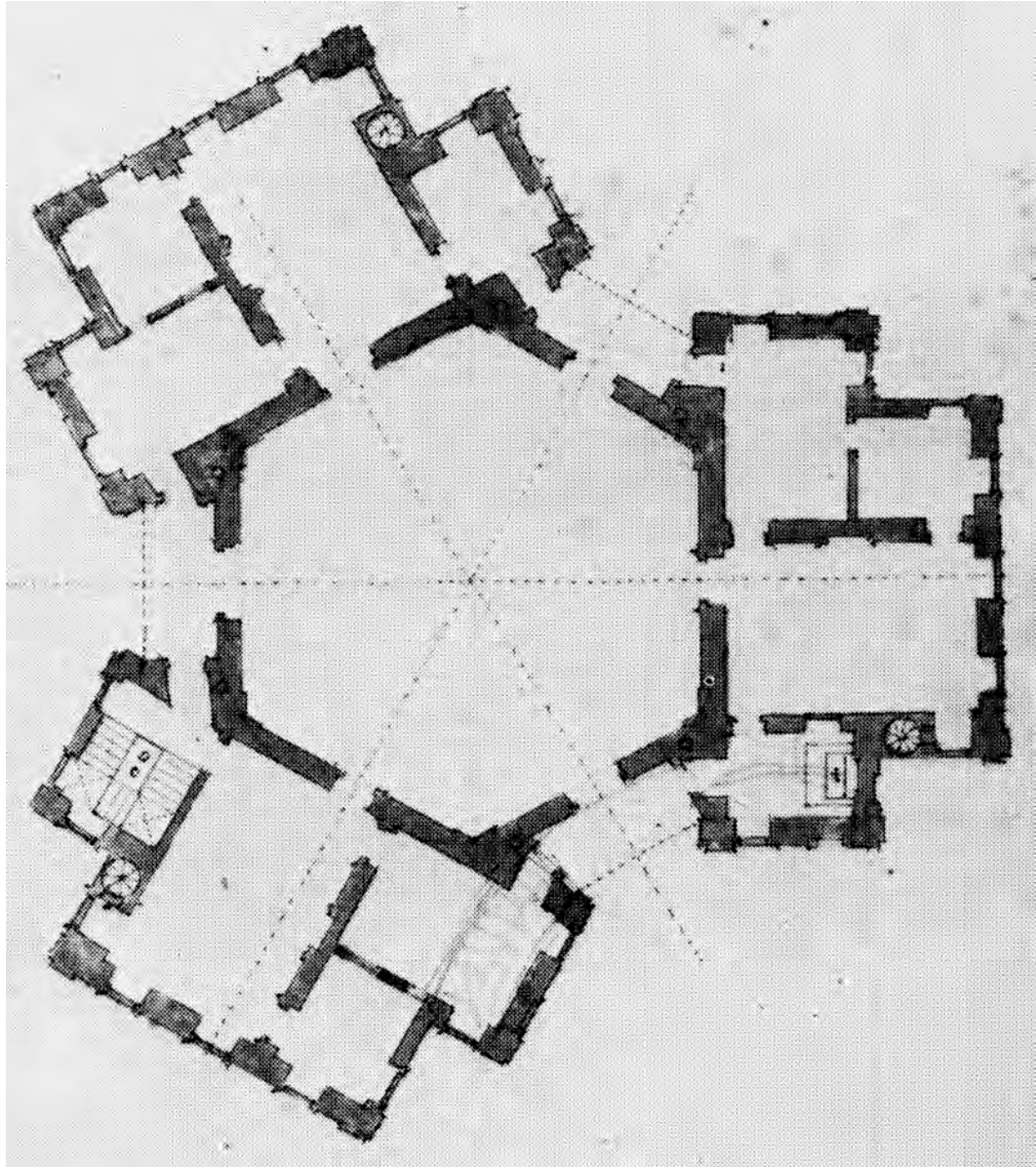


Figure 4.76. Fontana, Project for a Villa in the Veneto {first stage}, 1689, plan (Windsor Castle, Royal Library).

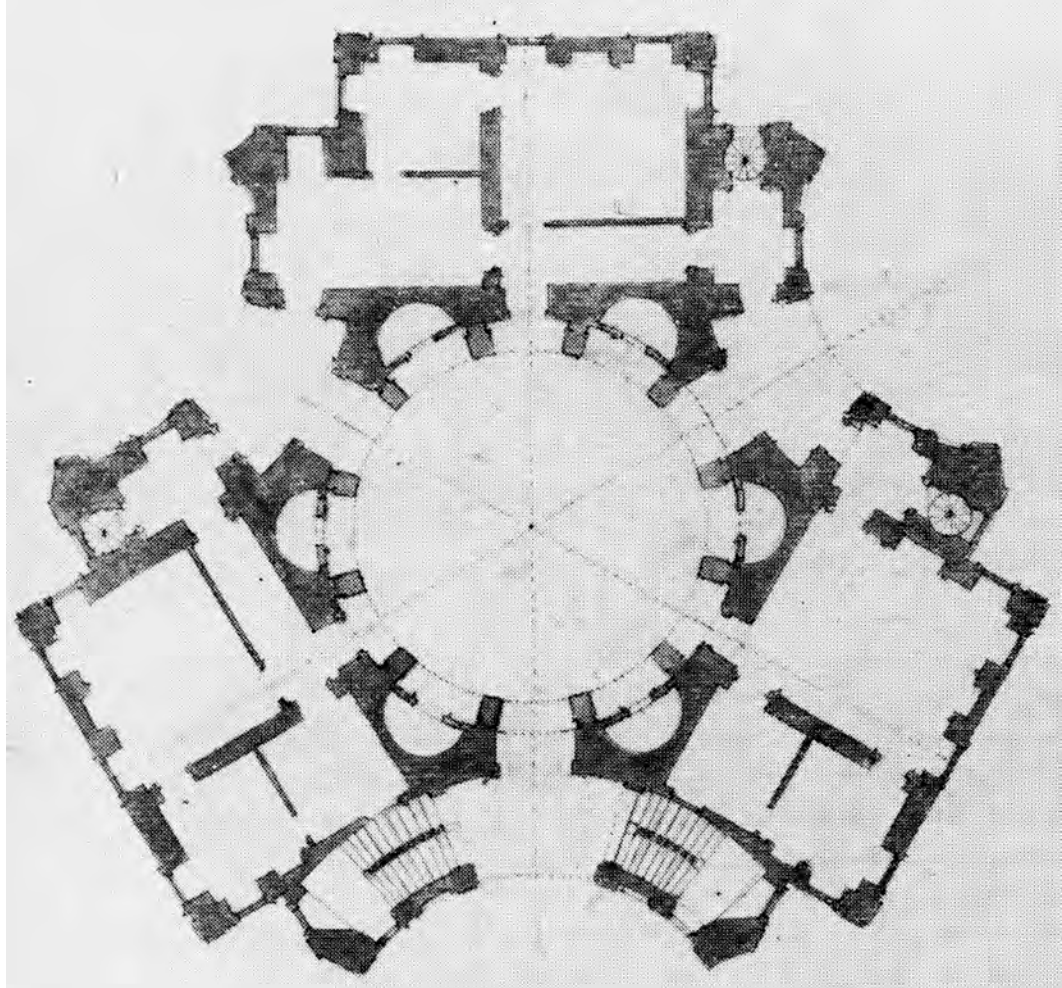


Figure 4.77. Fontana, Project for a Villa in the Veneto (second stage), 1689, plan (Windsor Castle, Royal Library).

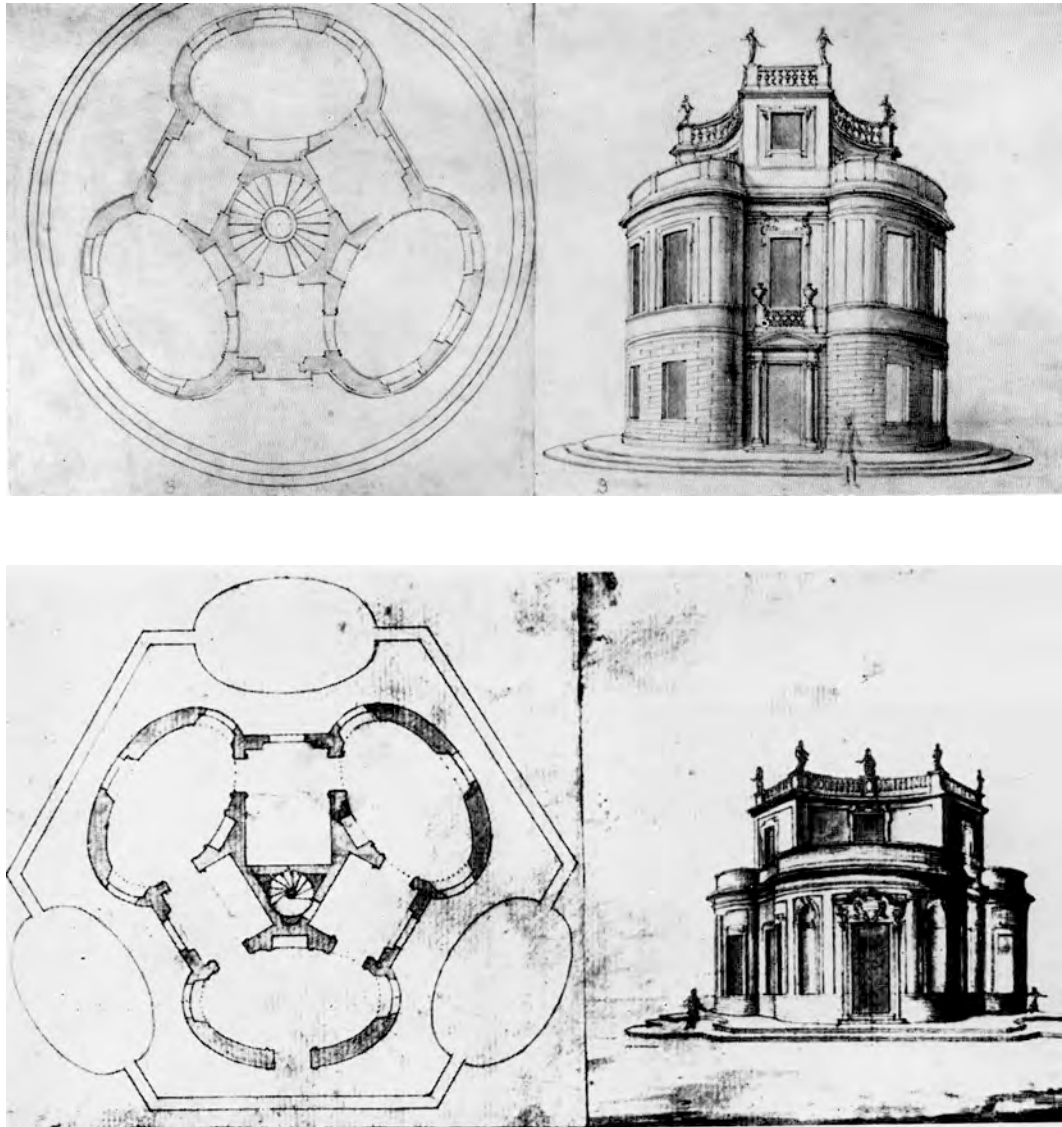


Figure 4.78. Fischer von Erlach, Projects for a Garden Pavilion, *ca.* 1694, plans and perspective views (Vienna, Albertina).

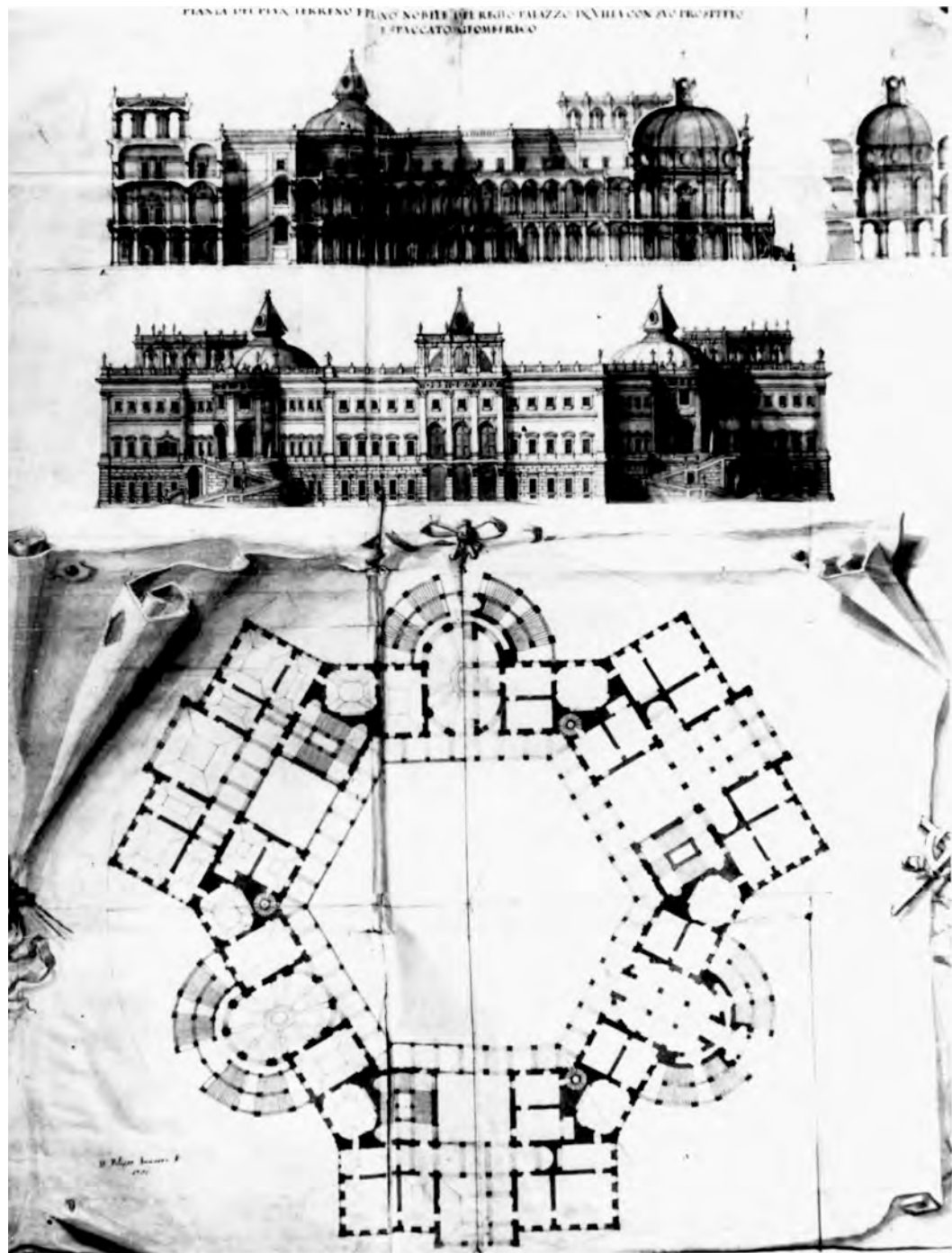


Figure 4.79. Juvarra, Project for a Royal Palace in a Villa, 1705, section, elevation and plan.

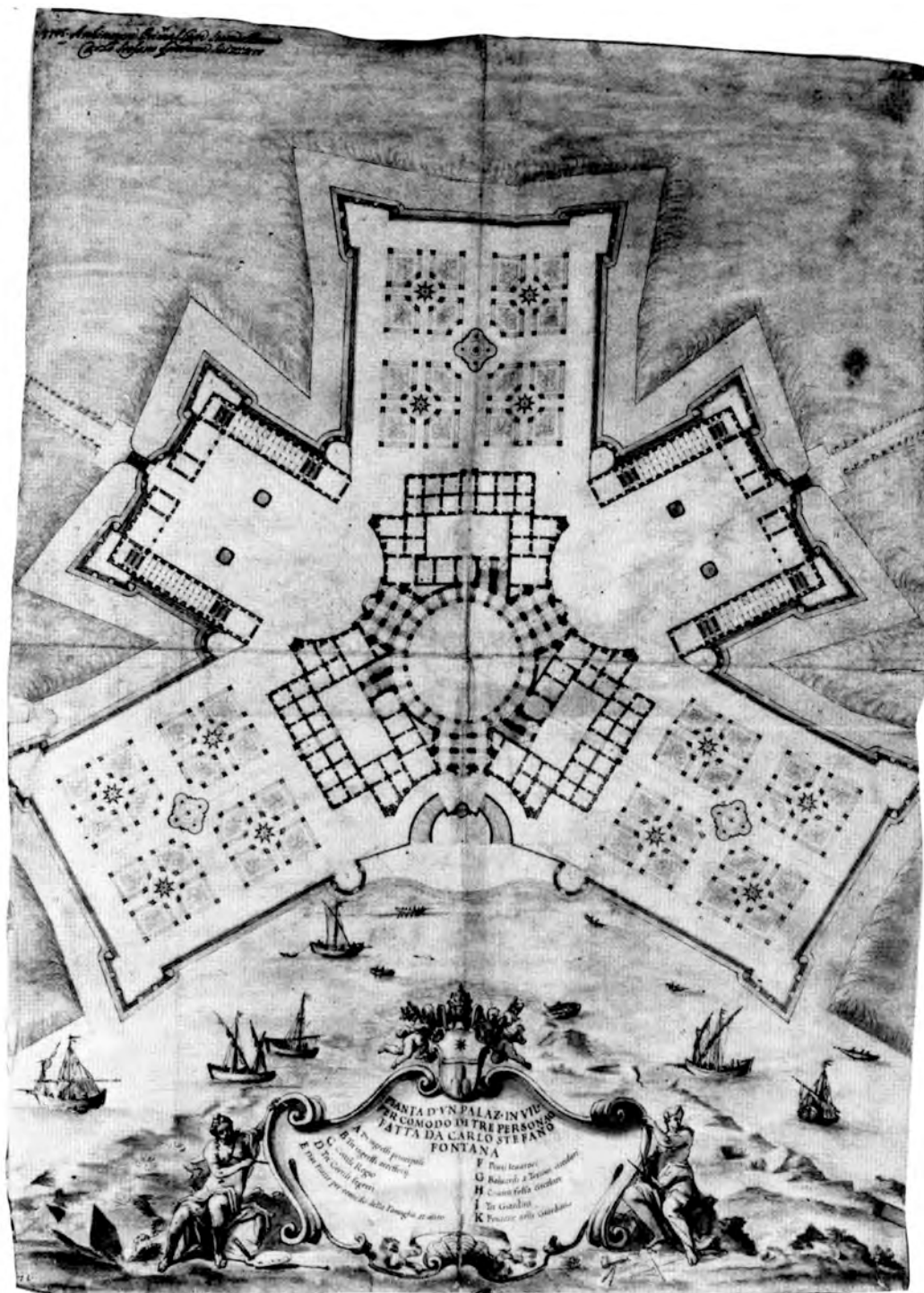


Figure 4.80. Fontana, Project for a Royal Palace in a Villa, 1705, plan.

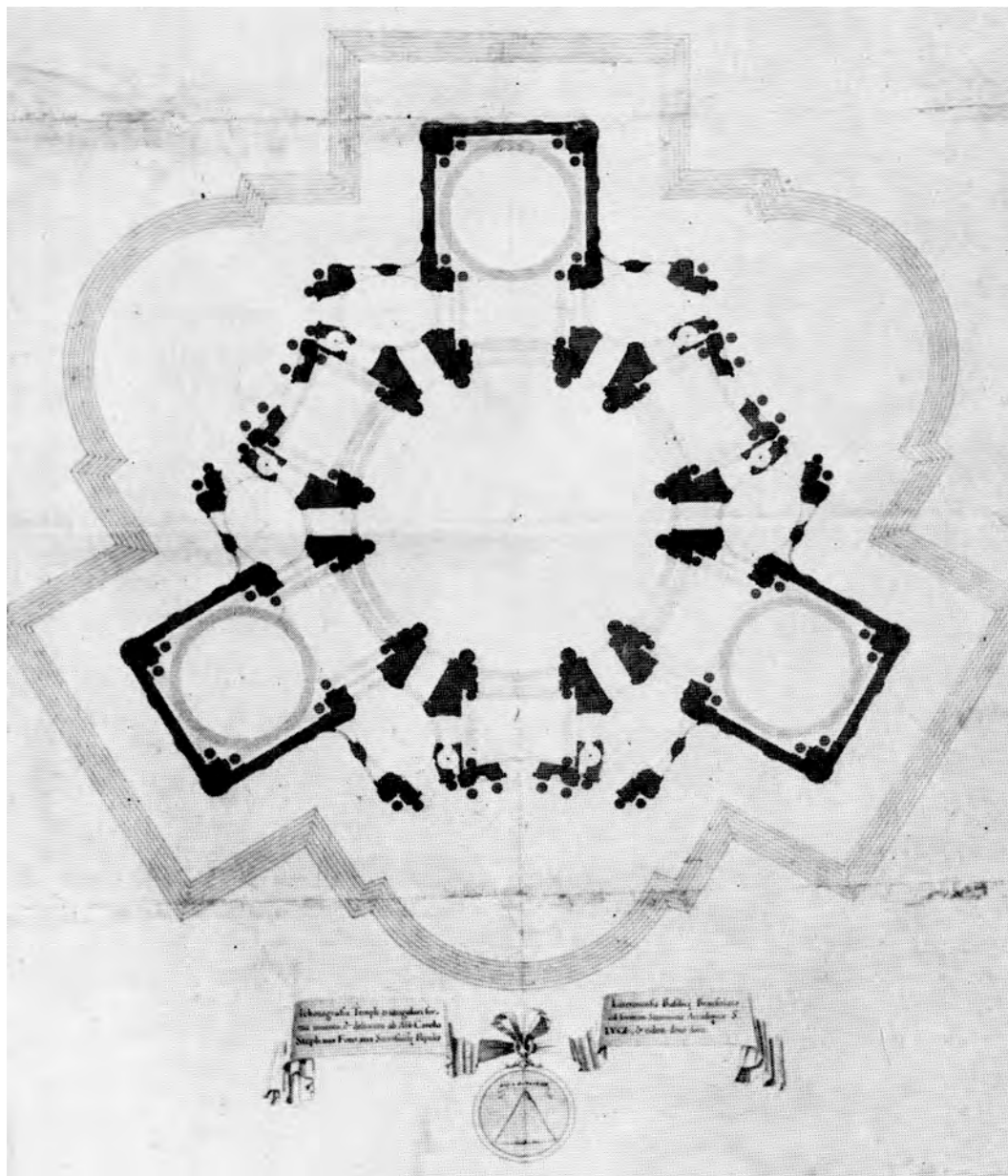


Figure 4.81. Fontana, Project for a Triangular-Hexagonal Temple, 1722, plan (Rome, Accademia di San Luca).

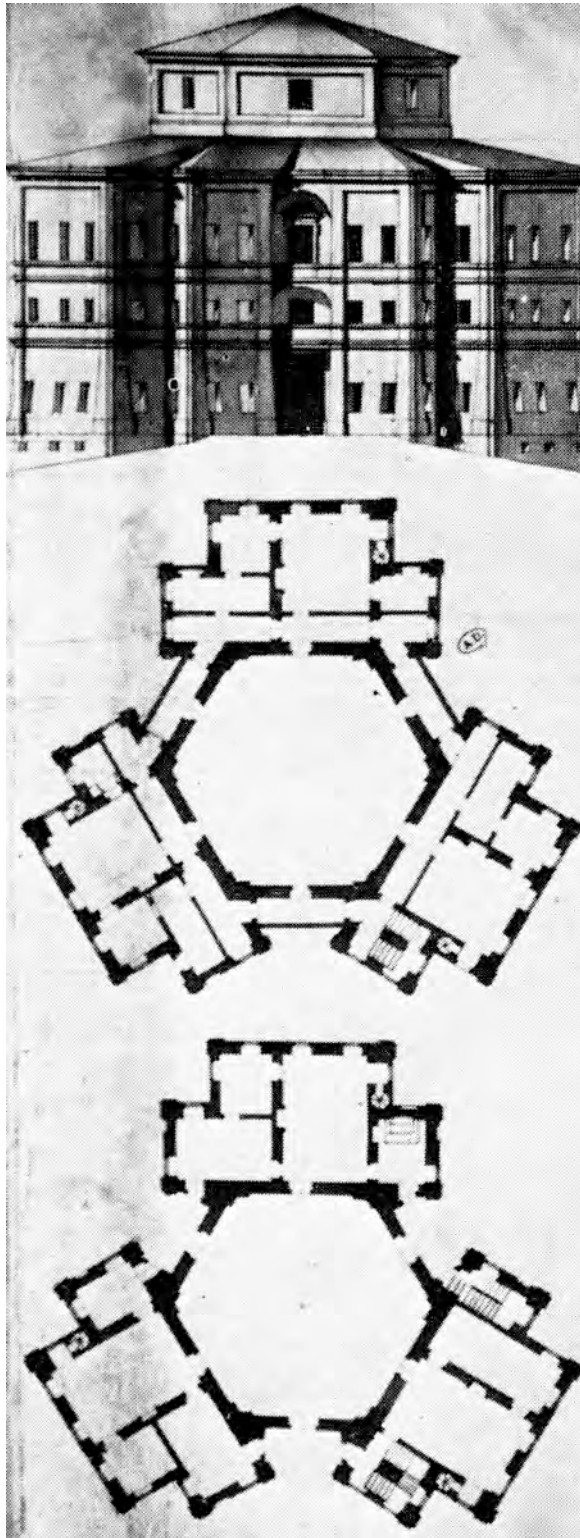


Figure 4.82. Vittone, Project for a Country House (after Fontana), elevation and plans (Paris, Musée des Arts Décoratifs).

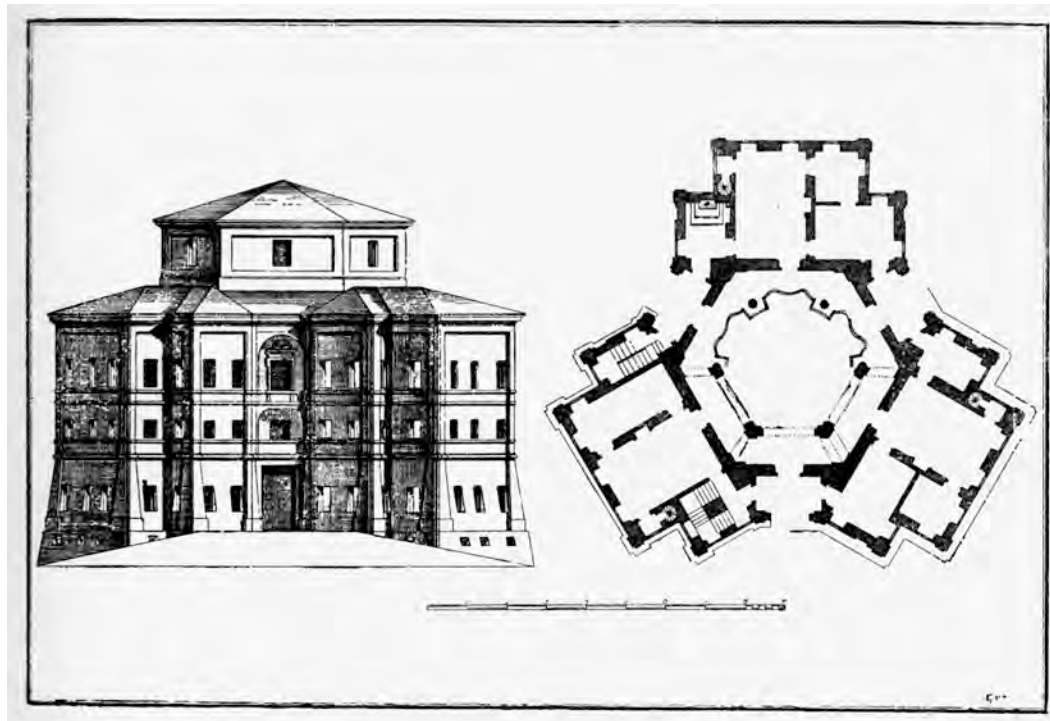


Figure 4.83. Vittone, Project for a Country House (after Fontana), elevation and plan (*Istruzioni diverse*, pl. 32).



Figure 4.84. Juvarra, Emblem of the Accademia di San Luca, 1705 (Turin, Private Collection).

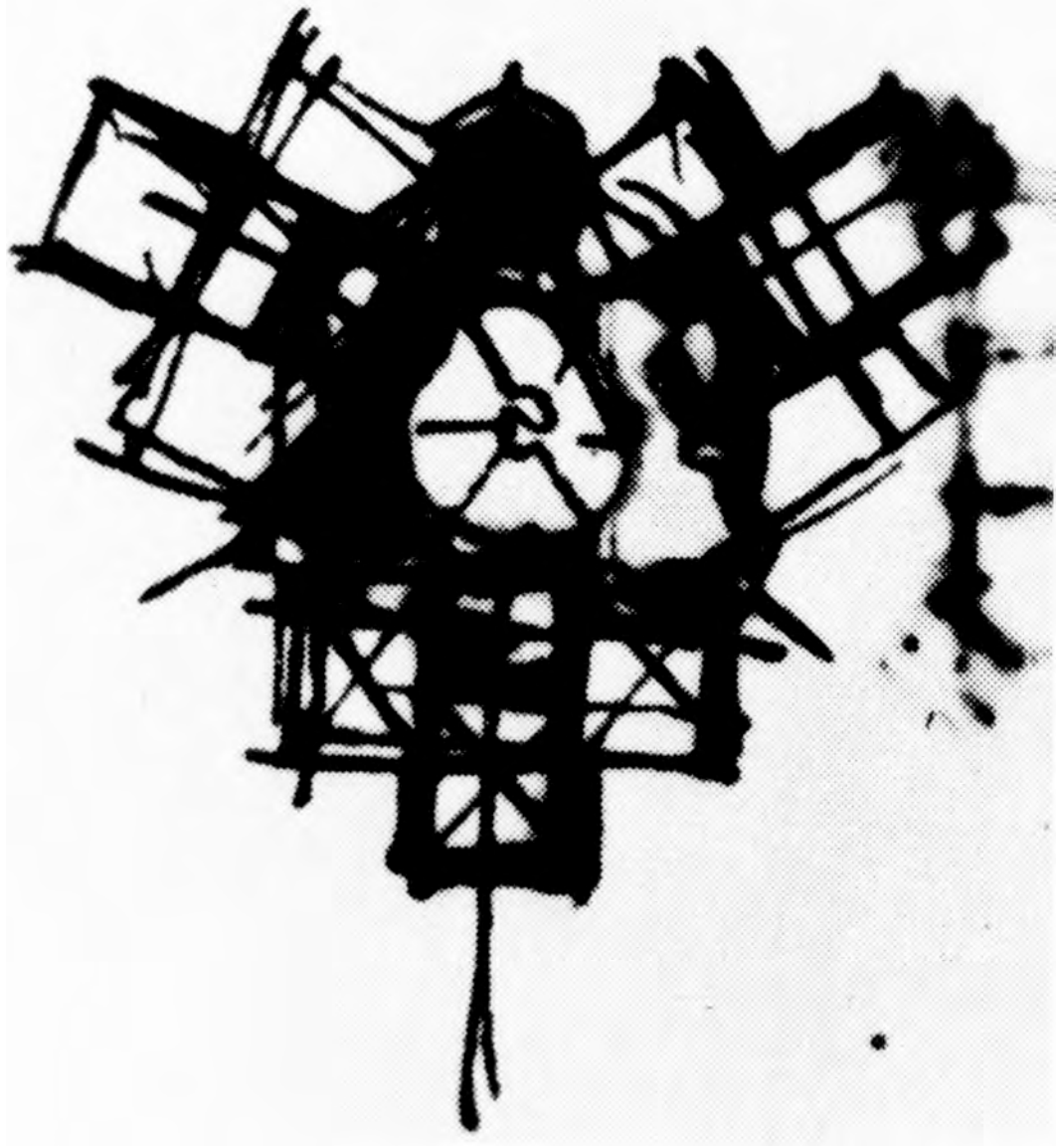


Figure 4.85. Juvarra, Project for a Triangular-Hexagonal Palace, schematic plan (Turin, Biblioteca Nazionale).

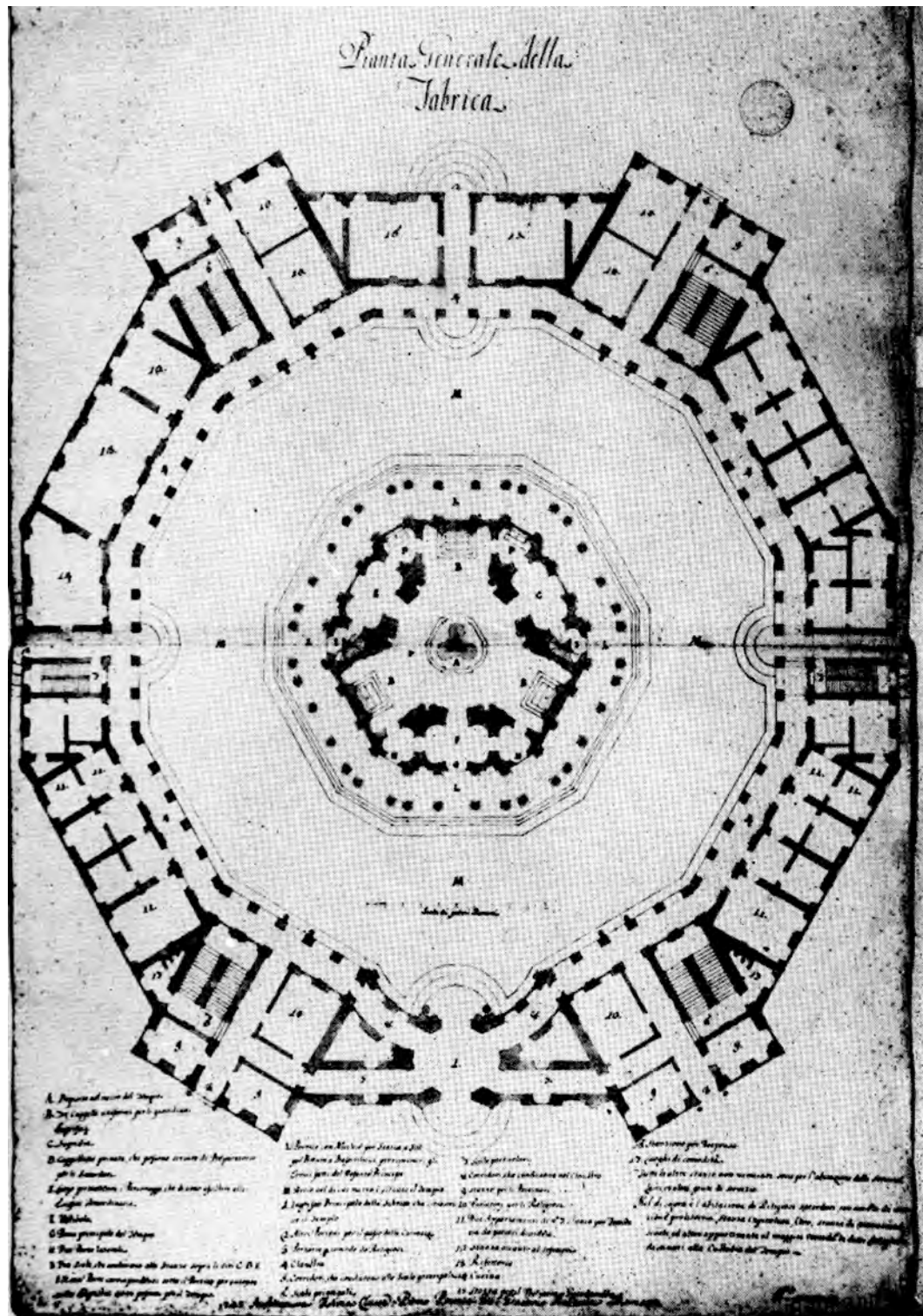


Figure 4.86. Pelliccia, Project for a Triangular-Hexagonal Temple in a Piazza, 1725, plan (Rome, Accademia di San Luca).

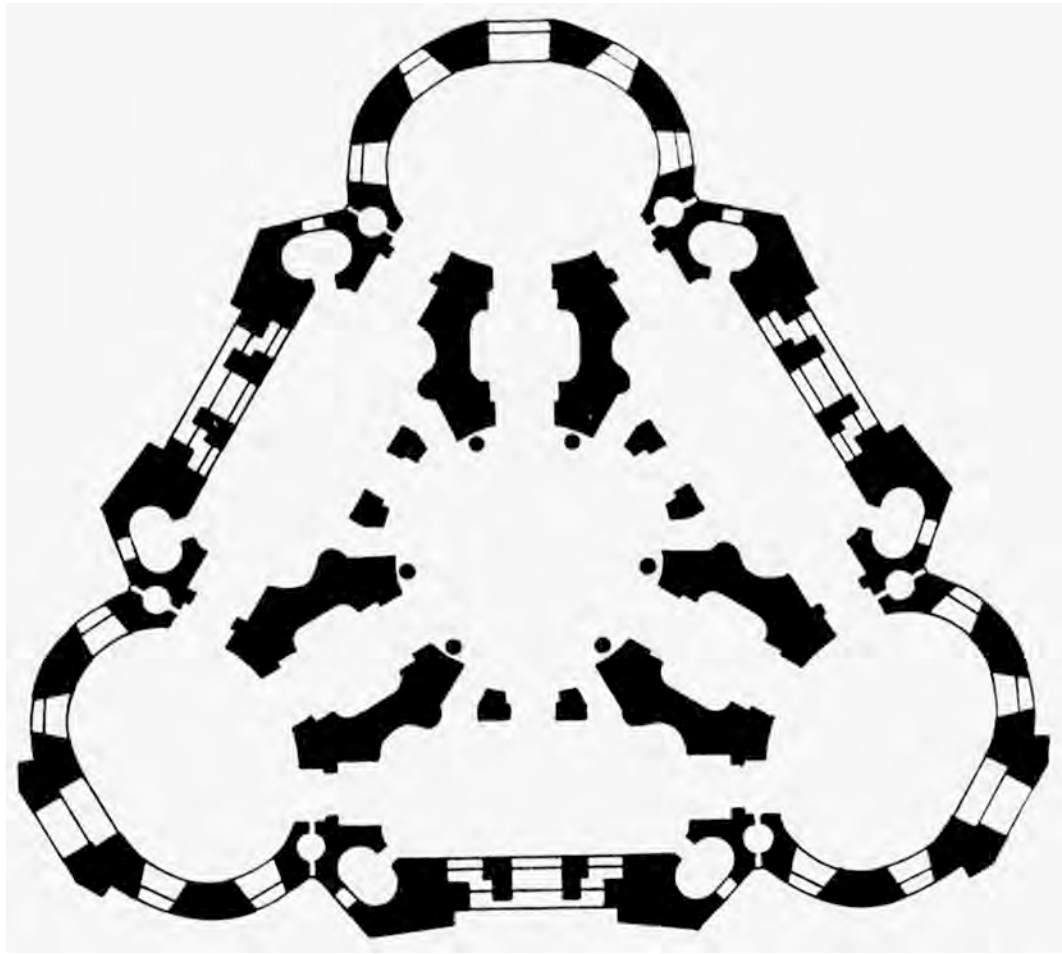


Figure 4.87. Valeri, Project for the New Sacristy of St. Peter's, 1715, plan.

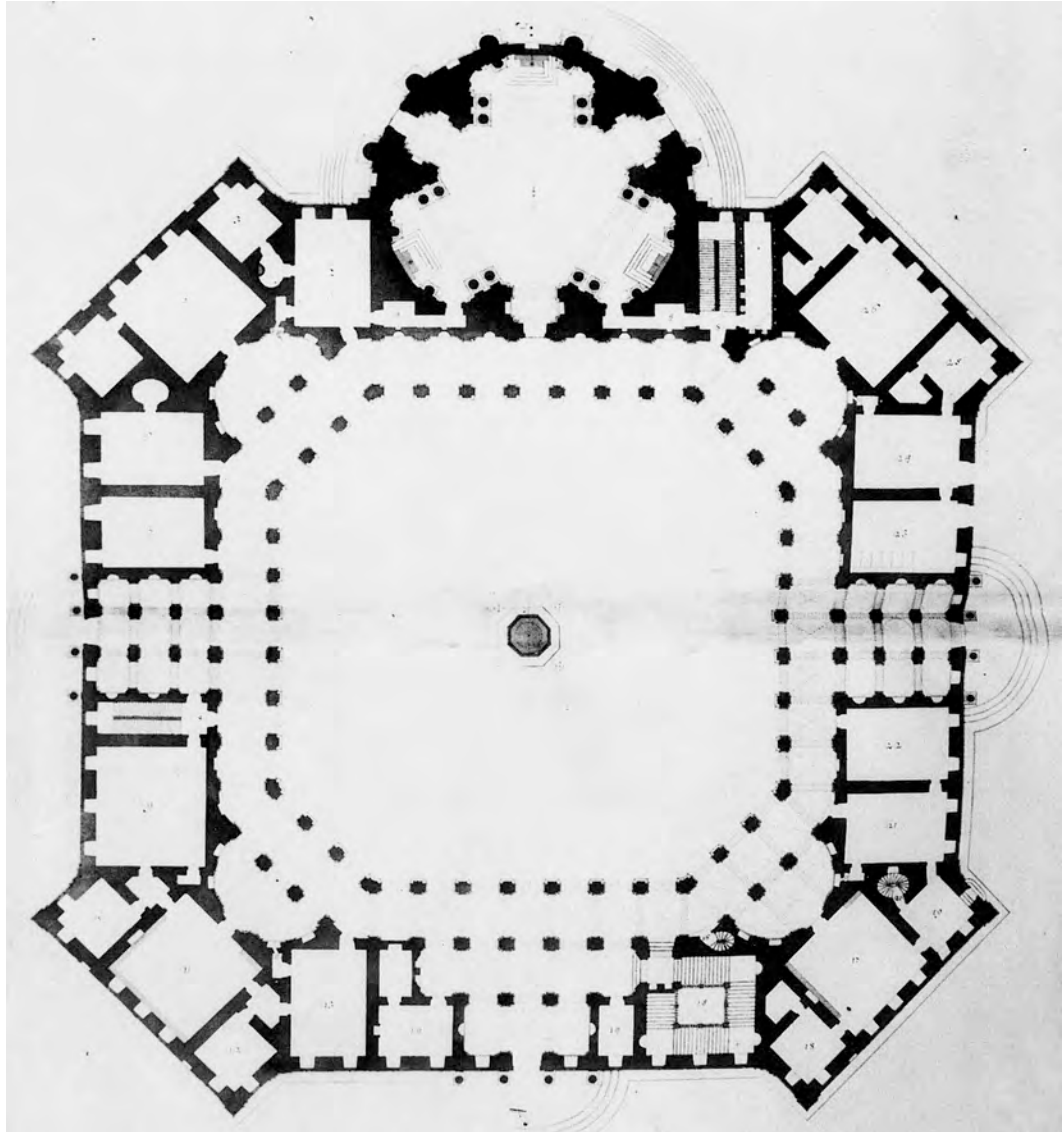


Figure 4.88. Collecini, Project for a Church and College of Arts and Mathematics, 1750, plan (Rome, Accademia di San Luca).

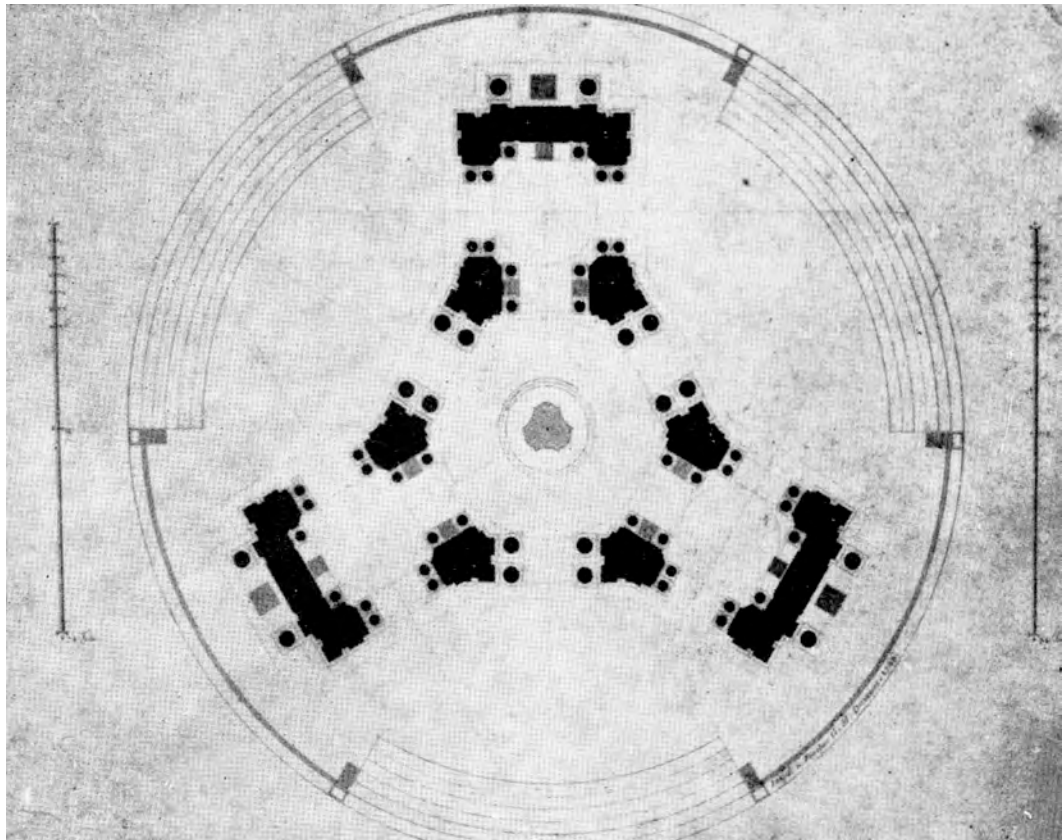


Figure 4.89. Dumont, Project for a Triangular Temple, 1746, plan (Rome, Accademia di San Luca).

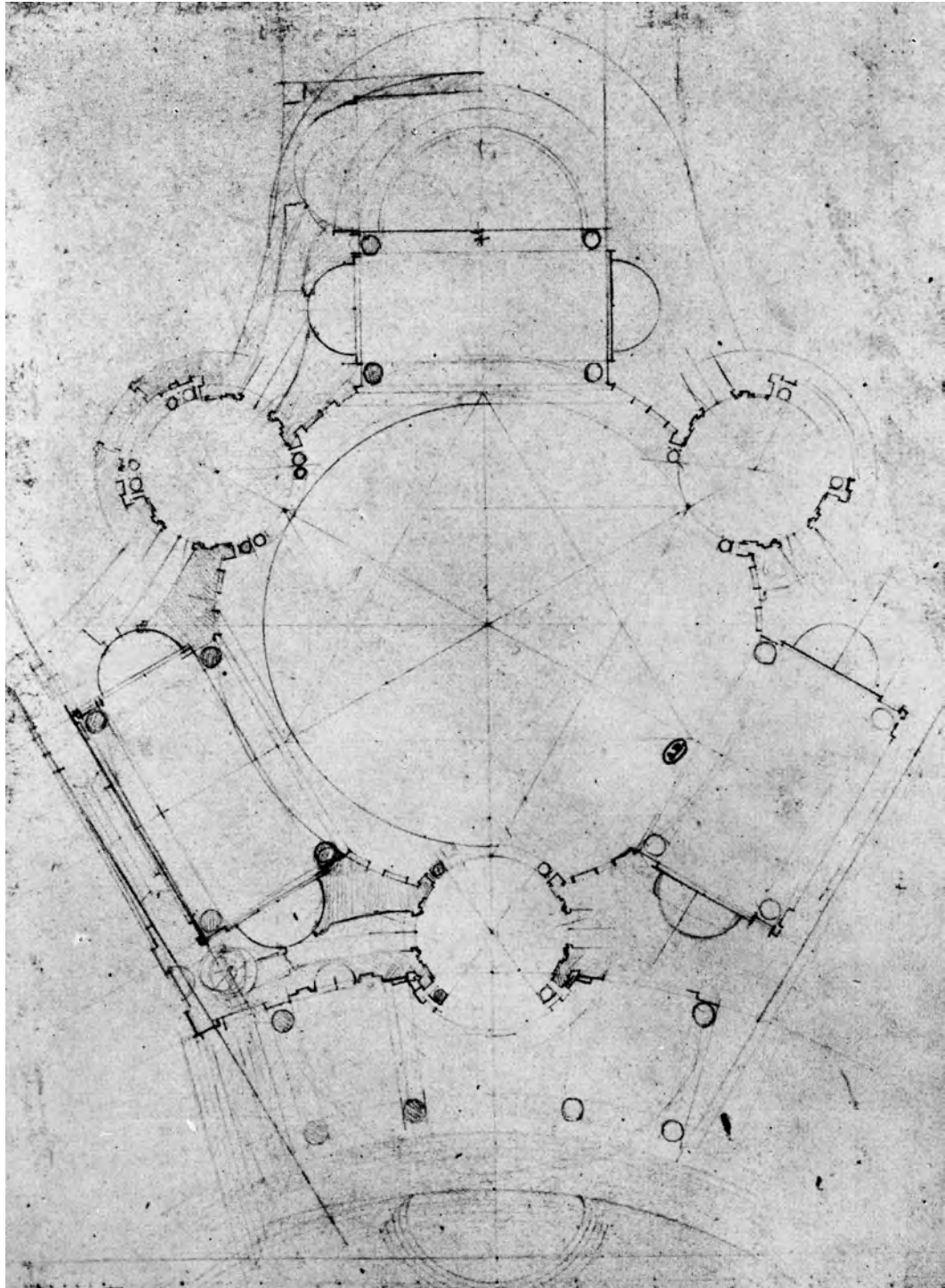


Figure 4.90. Vittone, Project for a Triangular-Hexagonal Church, schematic plan (Paris, Musée des Arts Décoratifs).

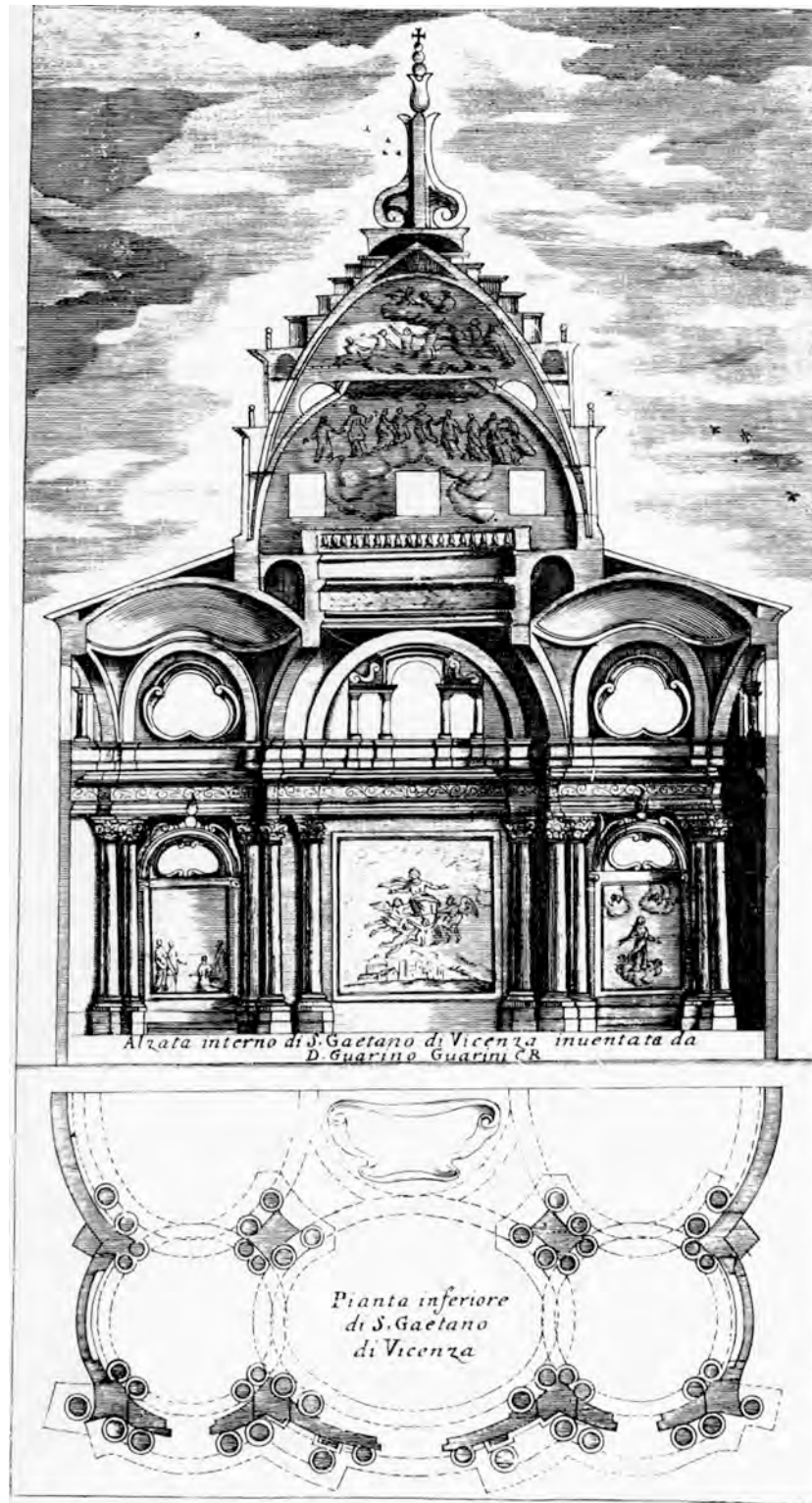


Figure 4.91. Guarini, Project for San Gaetano, Vicenza, section and half-plan (*Architettura civile*).

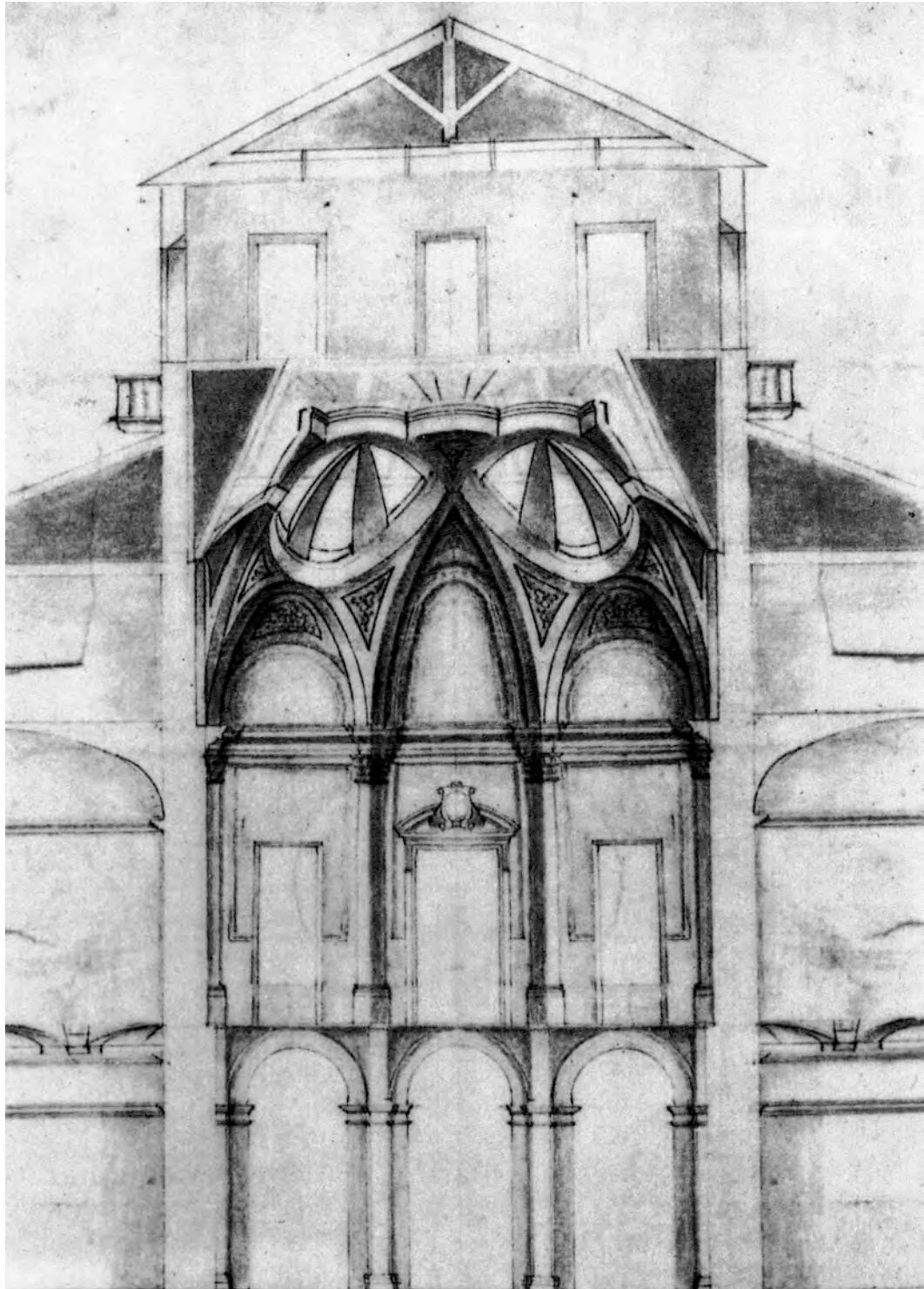


Figure 4.92. Guarini, Project for the Castello, Racconigi, 1676-83, section (Turin, Archivio di Stato).

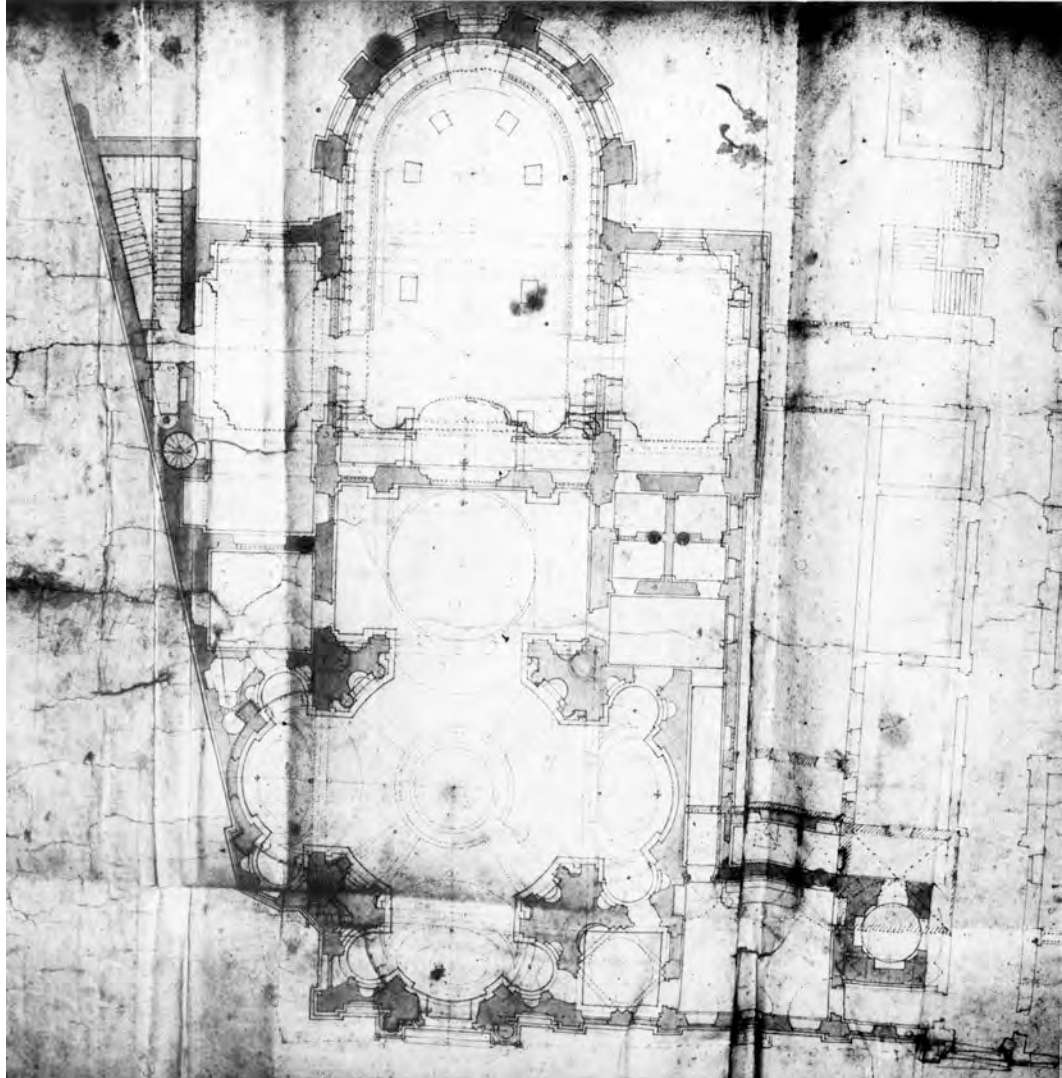


Figure 4.93. Juvarra, Sant'Andrea, Chieri, 1728-33 (demolished 1803), plan (Turin, Biblioteca Nazionale).



Figure 4.94. Juvarra, Carmine, Turin, 1732-35, side chapel.

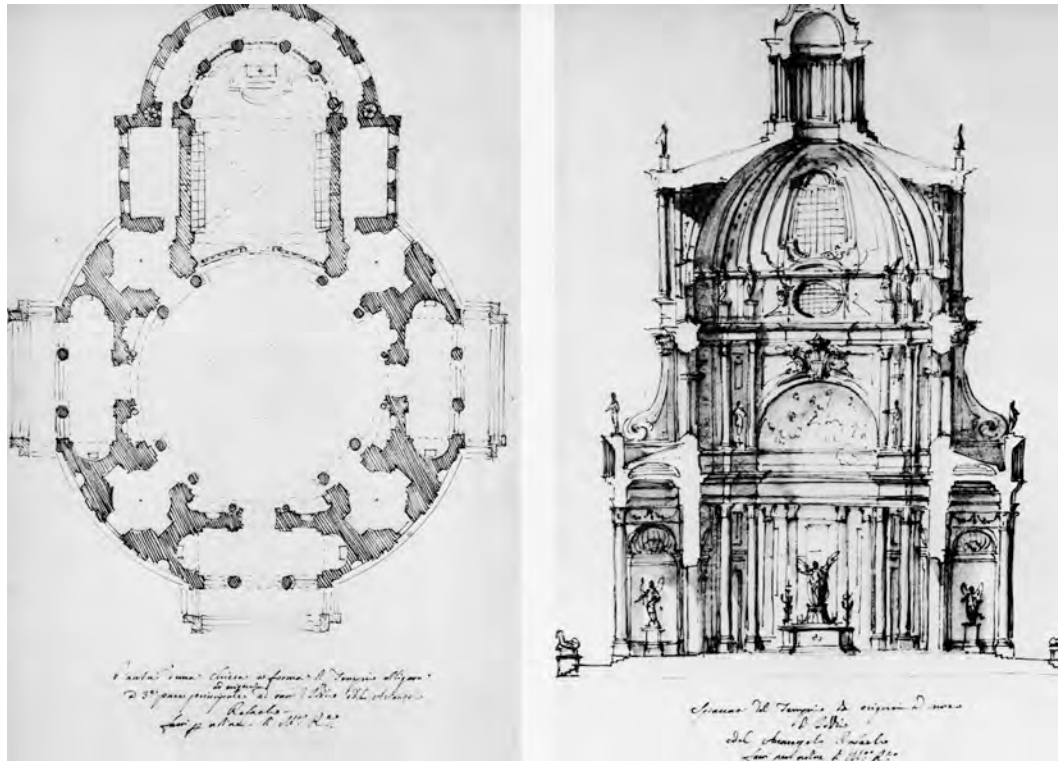


Figure 4.95. Juvarra, Project for San Raffaele, Turin, *ca.* 1724, plan and section (Turin, Museo Civico).

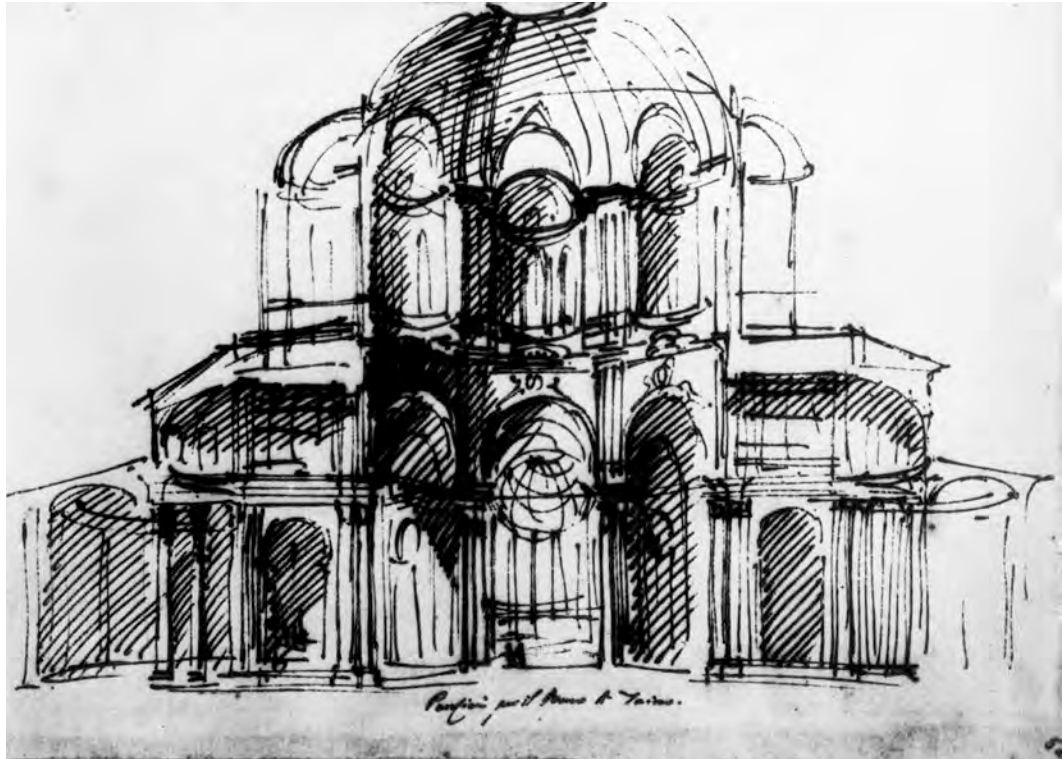


Figure 4.96. Juvarra, Project for the Duomo Nuovo, Turin, 1728-30, section (Turin, Museo Civico).

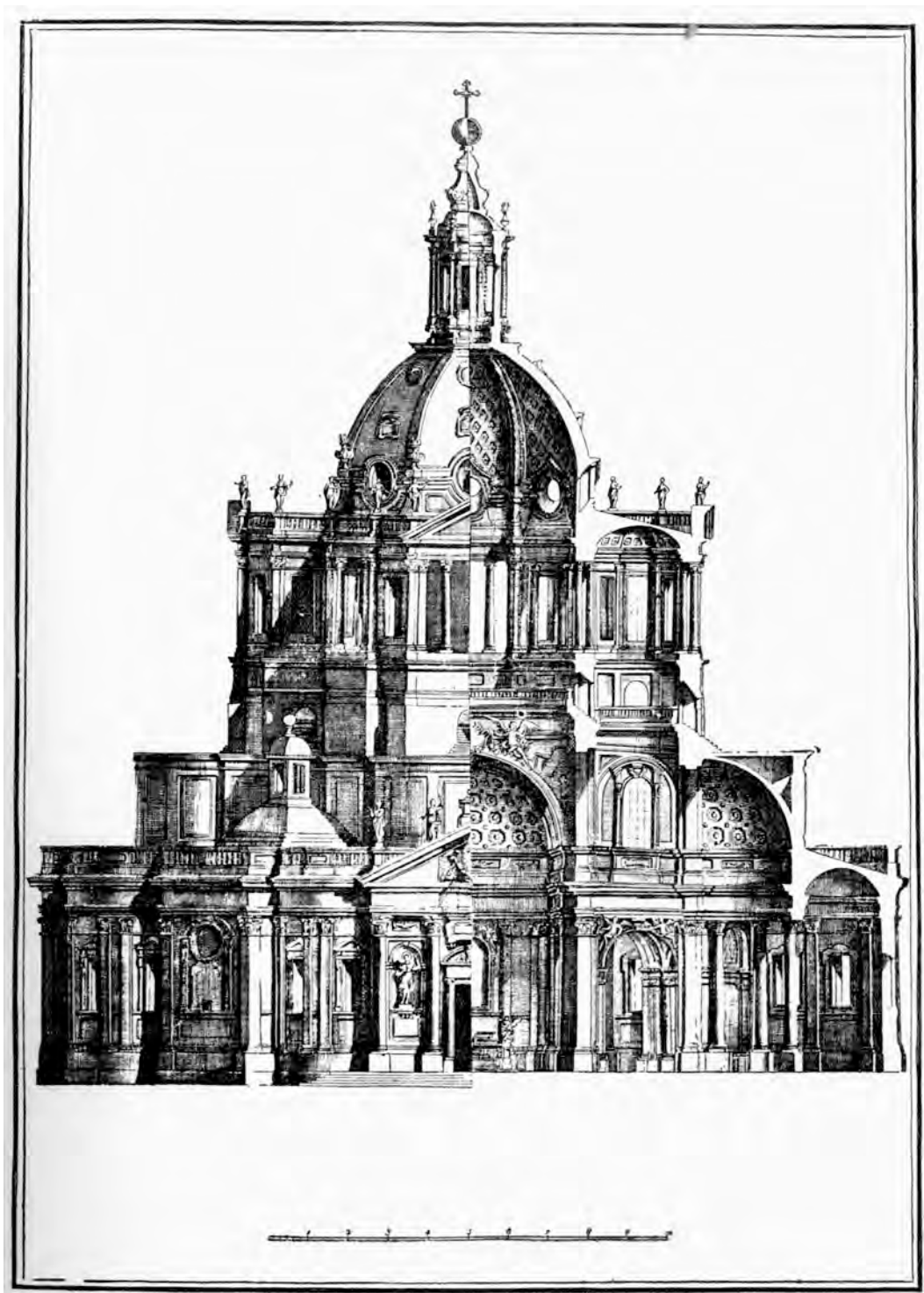


Figure 4.97. Vittone, Project for a Grand Parish Church, elevation-section (*Istruzioni diverse*, pl. 83).

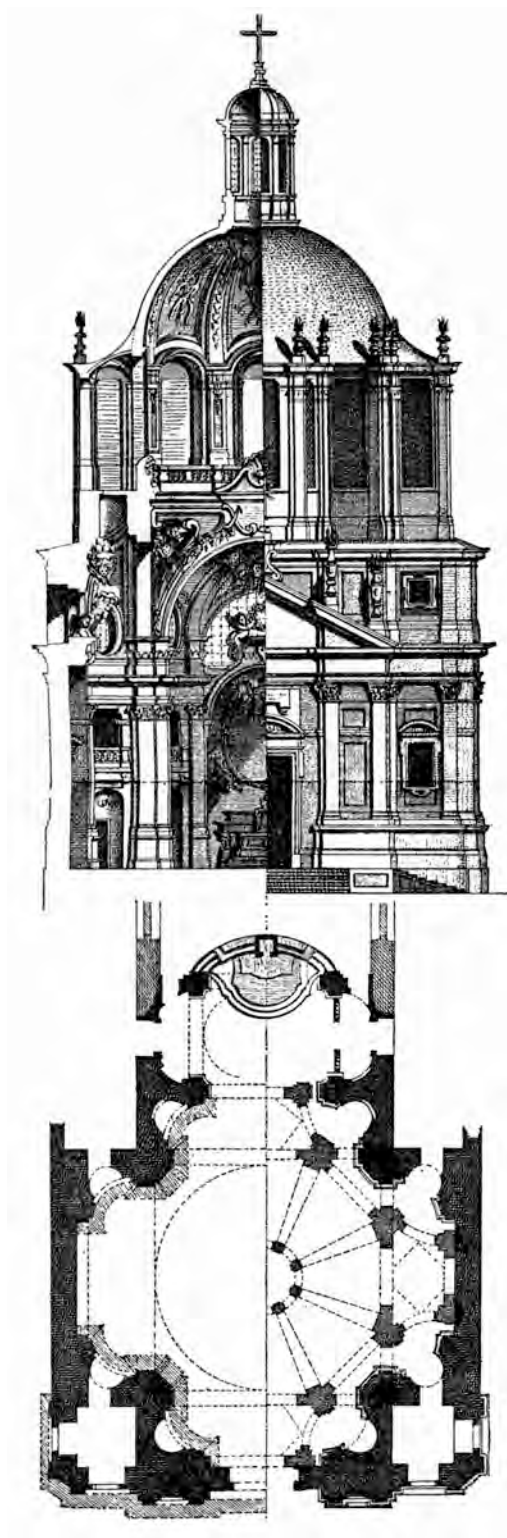


Figure 4.98. Vittone, San Bernardino, Chieri, 1740-44, section-elevation and plan (*Istruzioni diverse*, pl. 66).



Figure 4.99. Vittone, San Bernardino, Chieri, 1740-44, dome.



Figure 4.100. Vittone, San Bernardino, Chieri, 1740-44, pendentives and semi-dome.

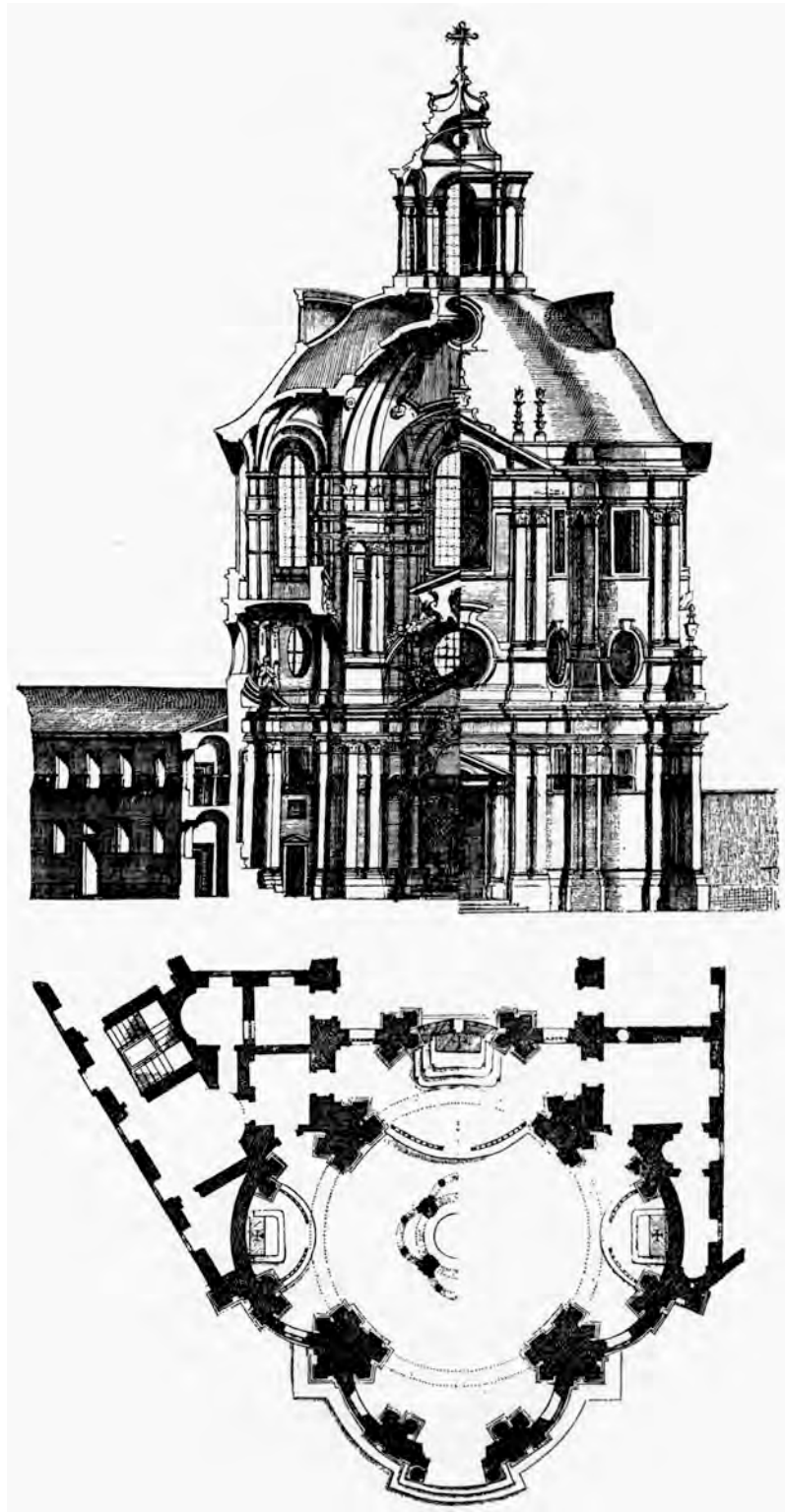


Figure 4.101. Vittone, Santa Chiara, Bra, 1742-48, section-elevation and plan (*Istruzioni diverse*, pl. 73).

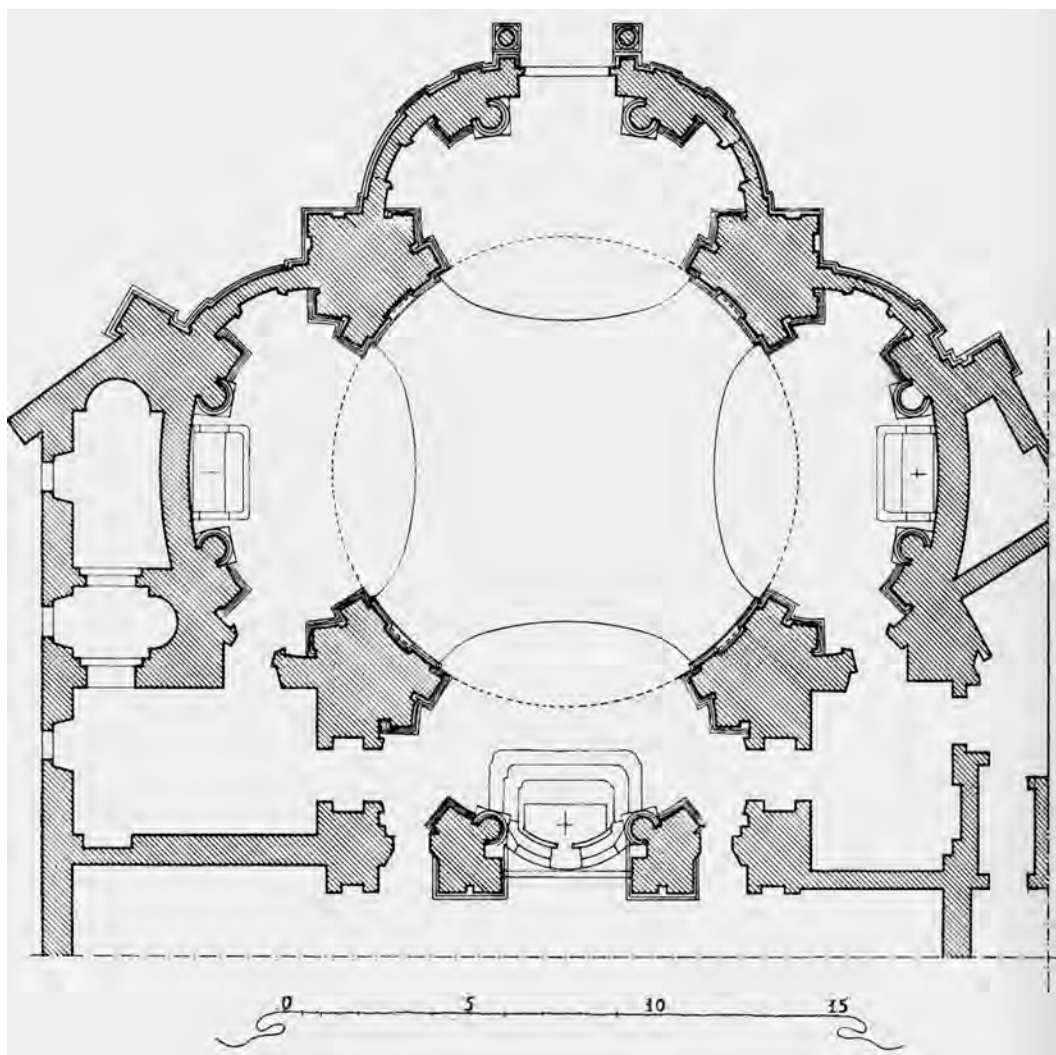


Figure 4.102. Vittone, Santa Chiara, Bra, 1742-48, plan.

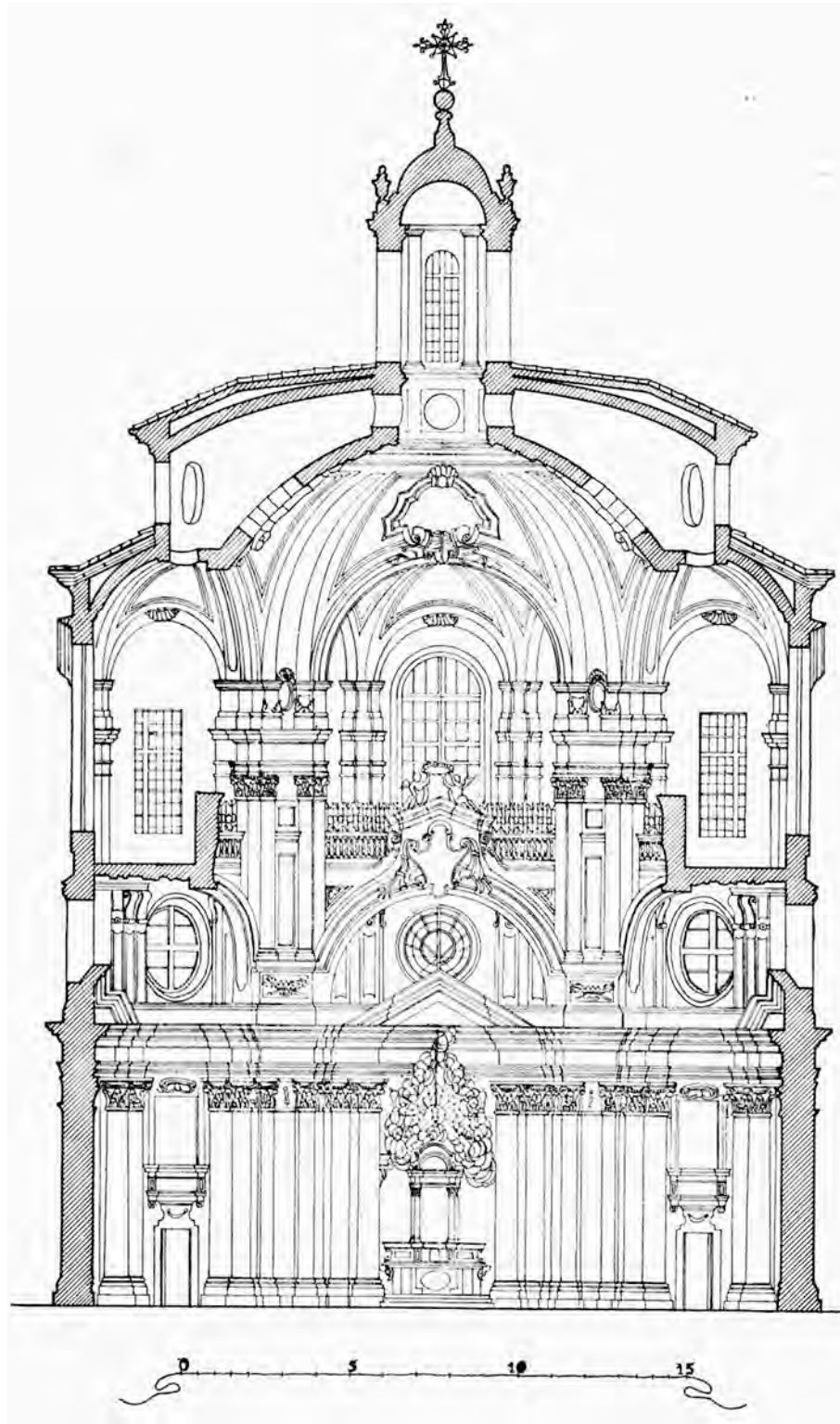


Figure 4.103. Vittone, Santa Chiara, Bra, 1742-48, transverse section.

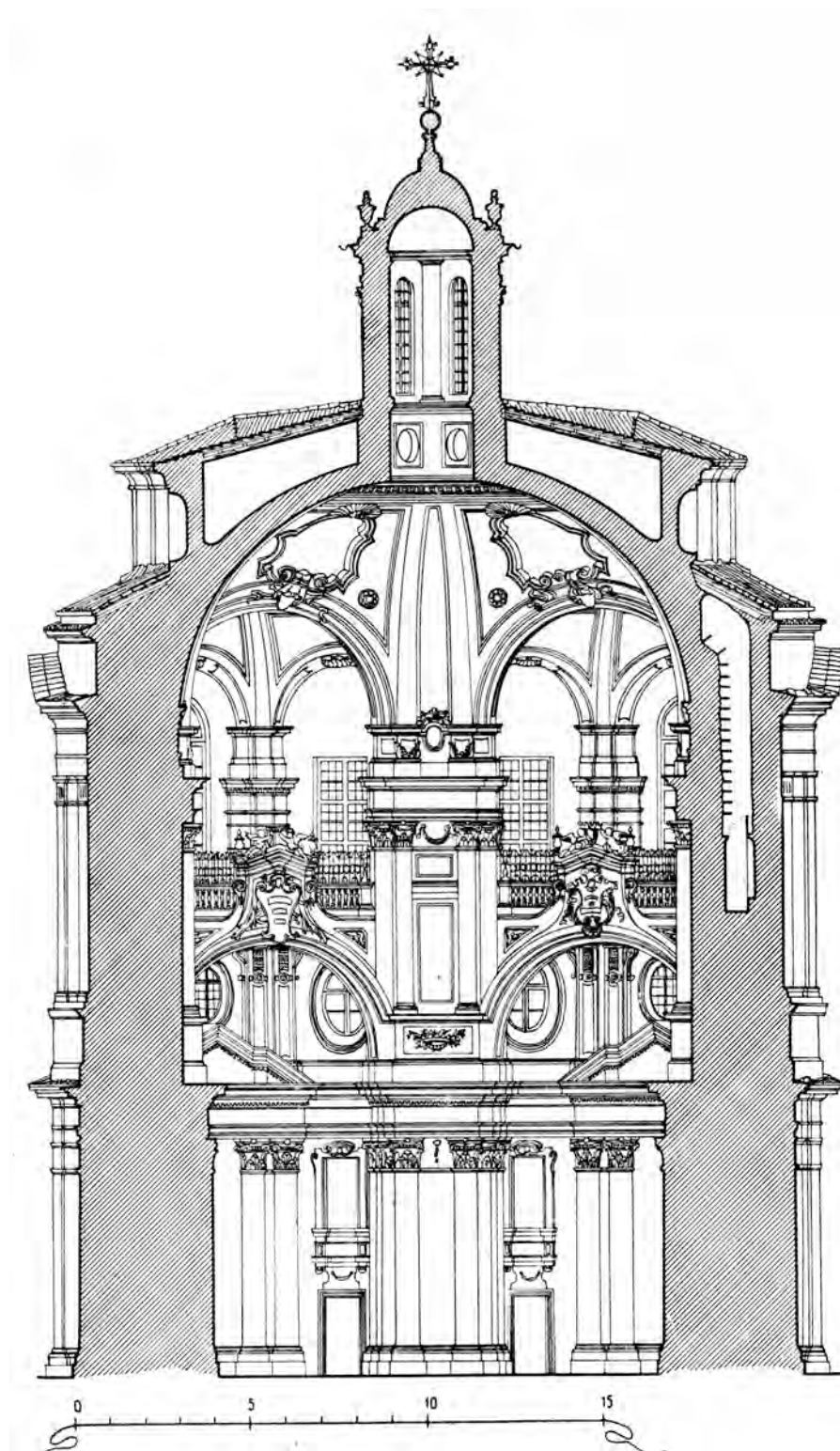


Figure 4.104. Vittone, Santa Chiara, Bra, 1742-48, diagonal section.



Figure 4.105. Vittone, Santa Chiara, Bra, 1742-48, dome.



Figure 4.106. Vittone, Santa Chiara, Bra, 1742-48, exterior.



Figure 4.107. Gallo, Santa Chiara, Mondovì Piazza, 1712-24, dome.



Figure 4.108. Juvarra, Villa Morra di Lavriano, Villastellone, *ca.* 1732-33, *salone*.

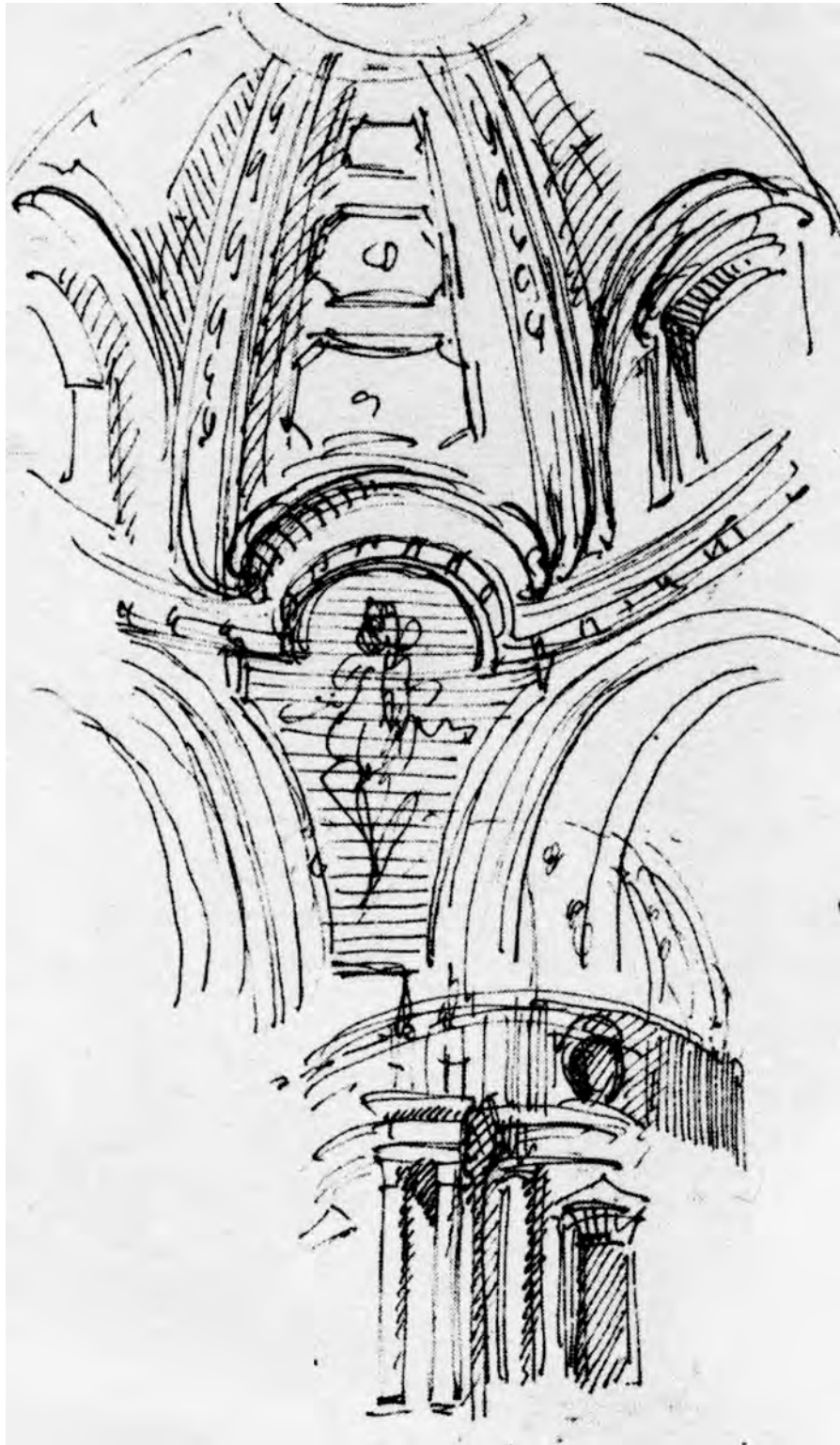


Figure 4.109. Juvarra, Sant'Uberto, Venaria Reale, preliminary pendentive study.

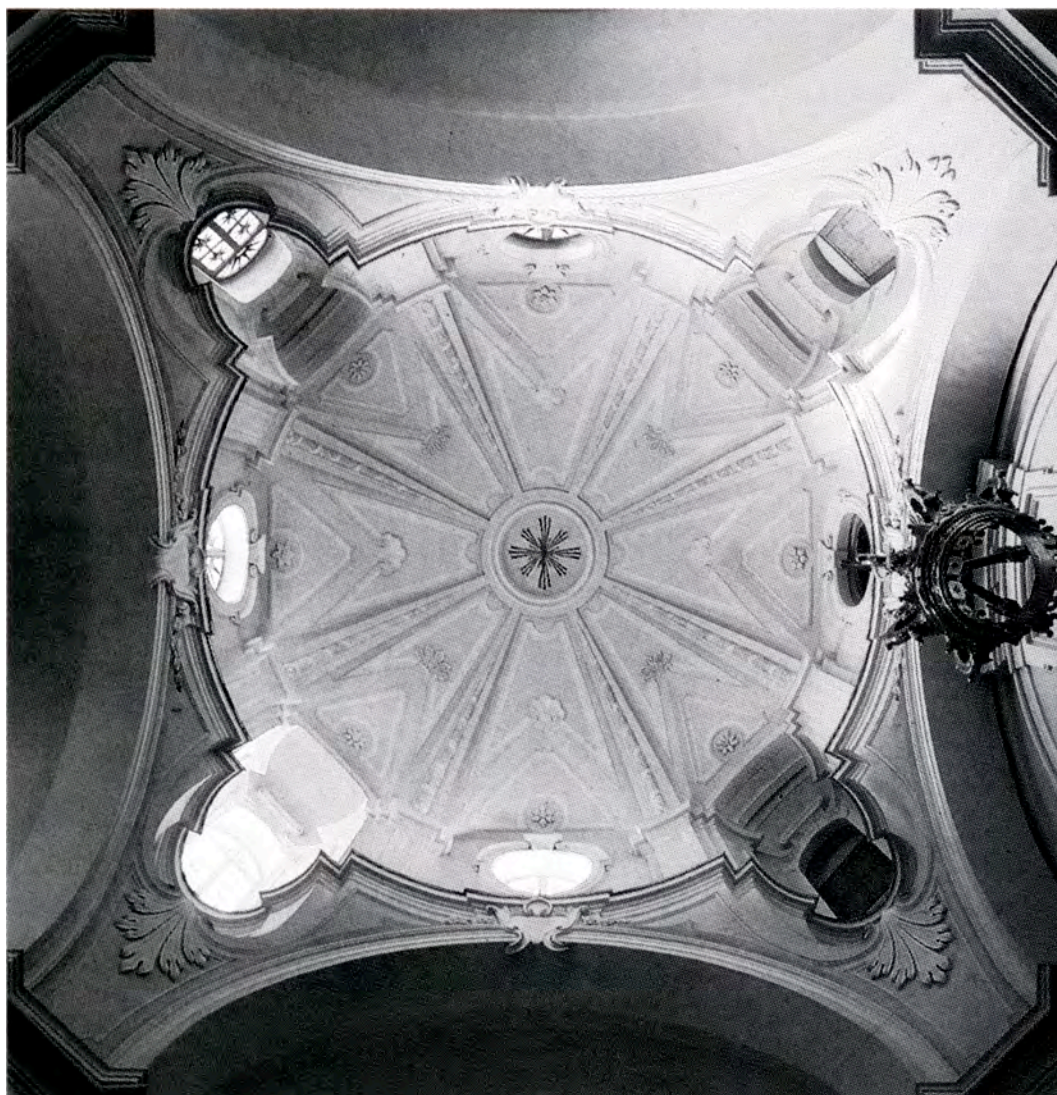


Figure 4.110. Vittone, Chapel, Ospizio di Carità, Carignano, 1744, dome.

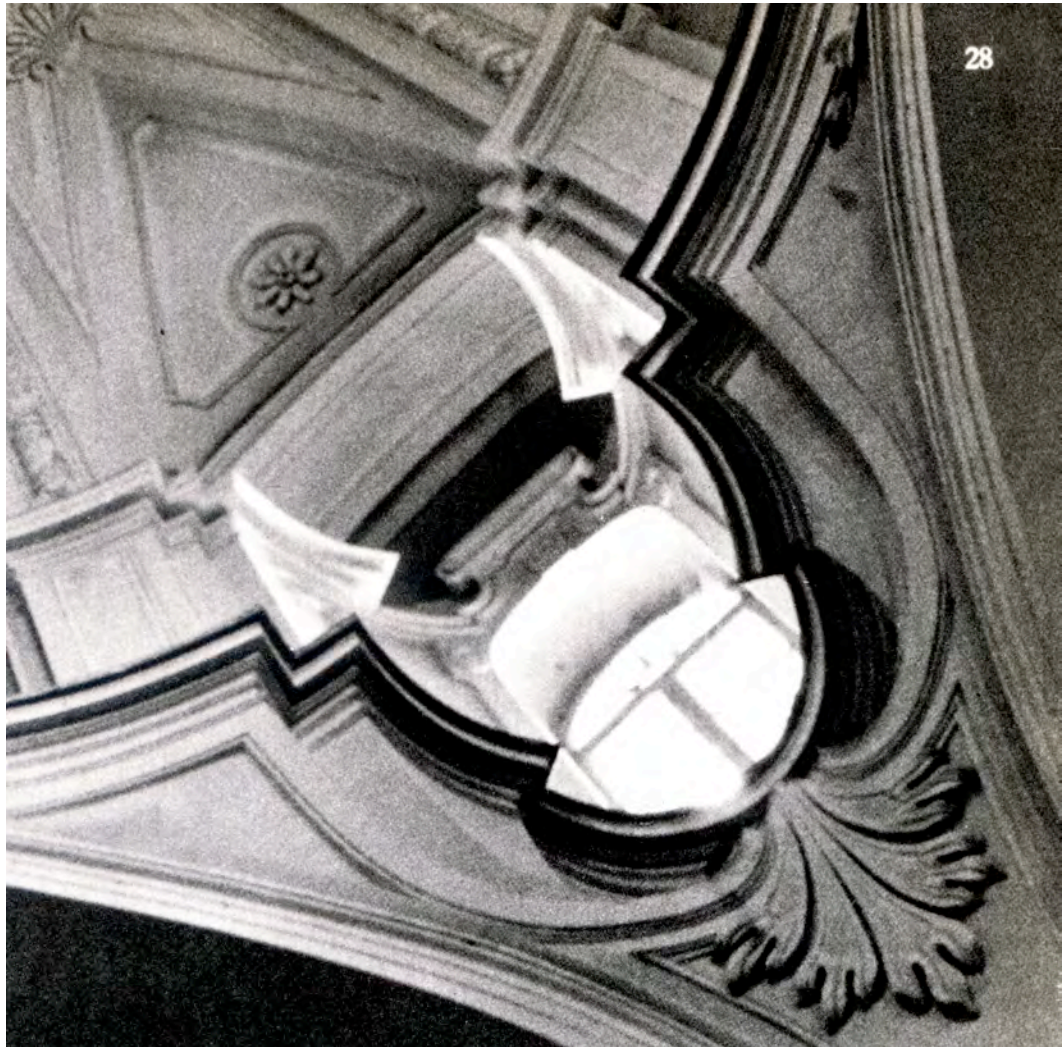


Figure 4.111. Vittone, Chapel, Ospizio di Carità, Carignano, 1744, pendentive detail.



Figure 4.112. Vittone, Santa Maria di Piazza, Turin, *ca.* 1751-54, presbytery vault.



Figure 4.113. Vittone, Santa Maria di Piazza, Turin, *ca.* 1751-54, pendentive detail.



Figure 4.114. Vittone, Santi Pietro e Paolo, Mondovì, 1755, crossing with pendentives.



Figure 4.115. Vittone, Santi Pietro e Paolo, Mondovì, 1755, pendentive detail.

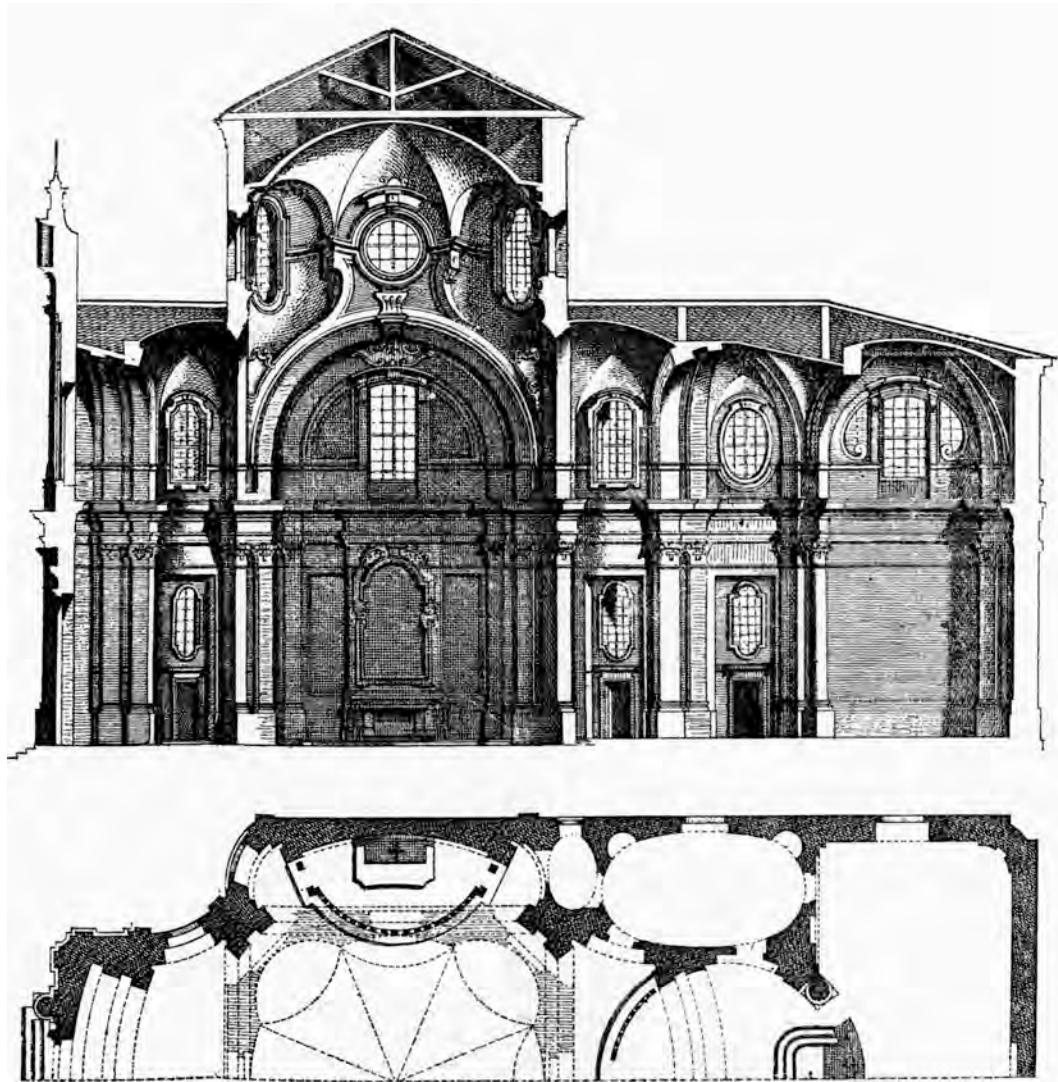


Figure 4.116. Vittone, Santa Croce, Villanova di Mondovì, section and half-plan (*Istruzioni diverse*, pl. 65).



Figure 4.117. Vittone, Santa Croce, Villanova di Mondovì, 1755, pendentive detail.



Figure 4.118. Vittone, Palazzo Giriodi, Costigliole Saluzzo, 1740, atrium vault.



Figure 4.119. Vittone, Santi Martiri, Turin, ca, 1751, sacristy vault.



Figure 4.120. Vittone and Quarini, San Benigno, Frutturaria, 1770-76, sacristy vault.

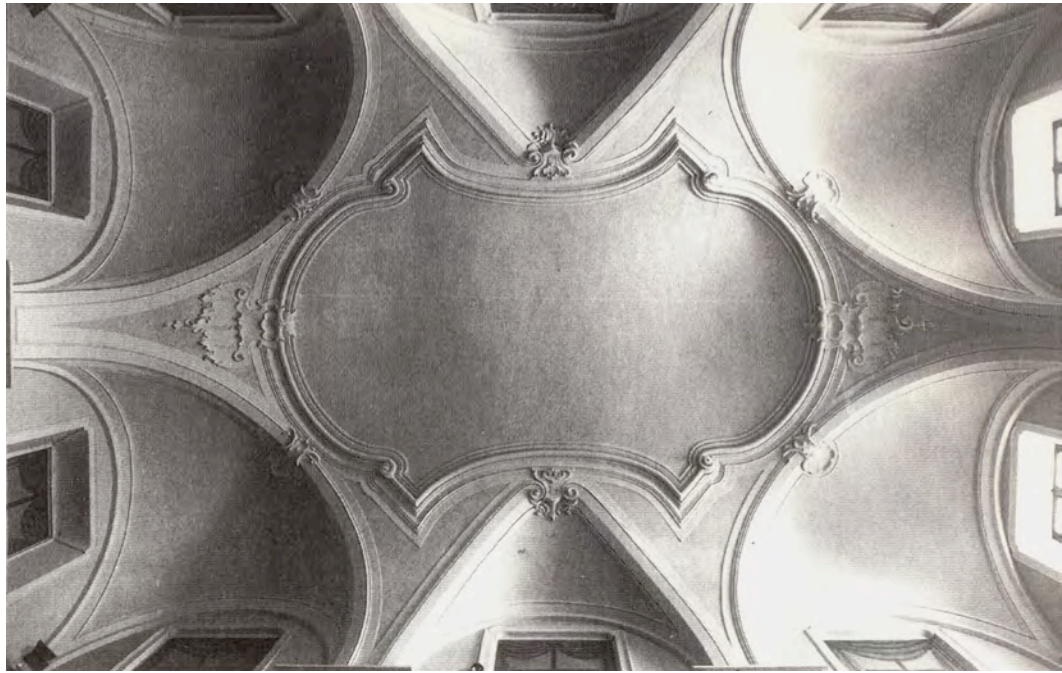


Figure 4.121. Vittone, Santi Pietro e Paolo, Mondovì Breo, 1771, sacristy vault.

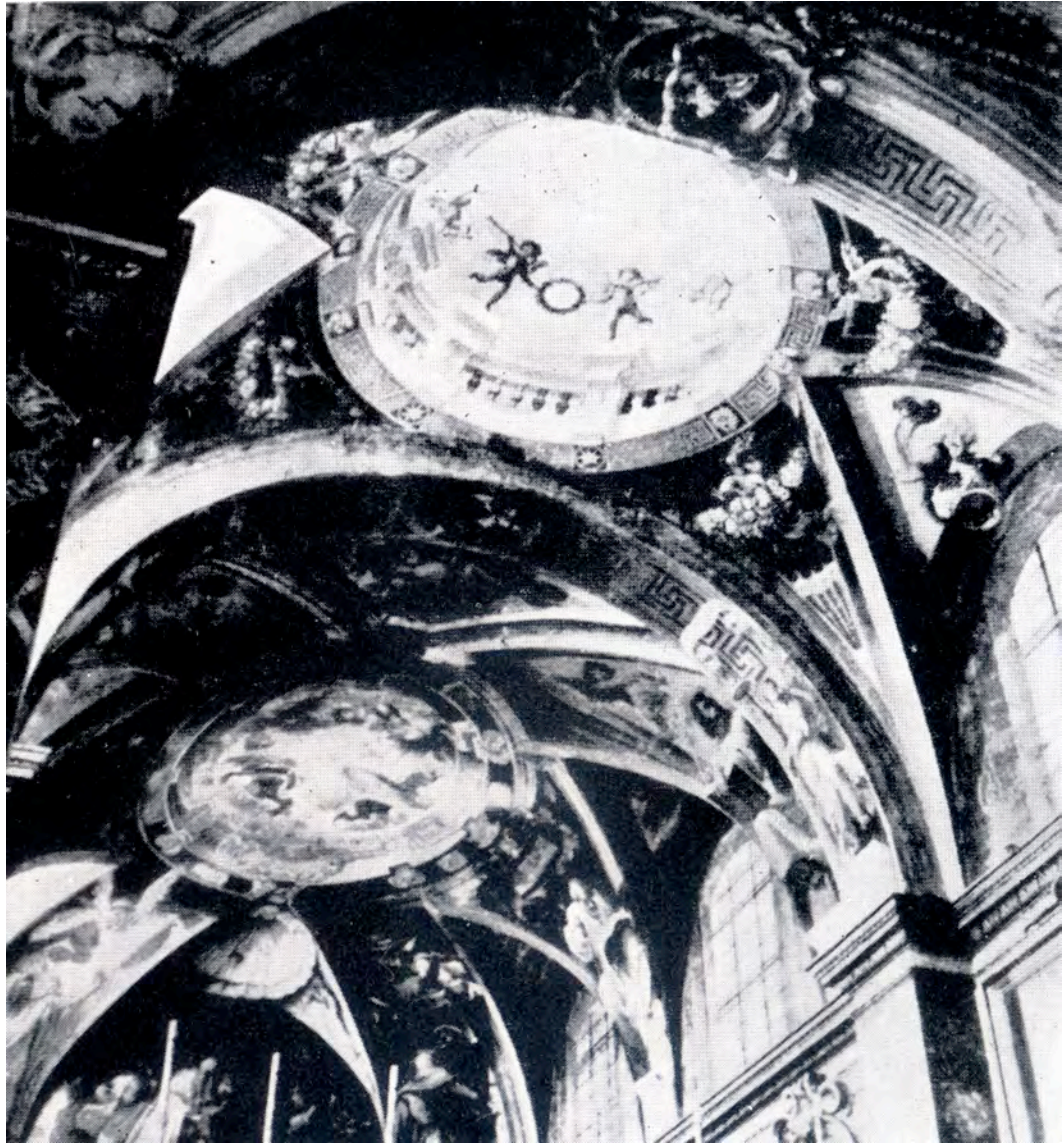


Figure 5.1. Alberti brothers, *Quadratura*, San Silvestro al Quirinale, Rome, ca. 1590s.



Figure 5.2. Alberti brothers, *Quadratura*, San Giovanni in Laterano, Rome, 1592.



Figure 5.3. Pozzo brothers, *Quadratura*, Santa Maria dell'Assunta, Savignano, 1712-15.



Figure 5.4. Pozzo brothers, *Quadratura*, Santa Trinità, Fossano, 1738-39.



Figure 5.5. Pozzo brothers, *Quadratura*, Santa Croce, Cavalleggeri, 1737-43.

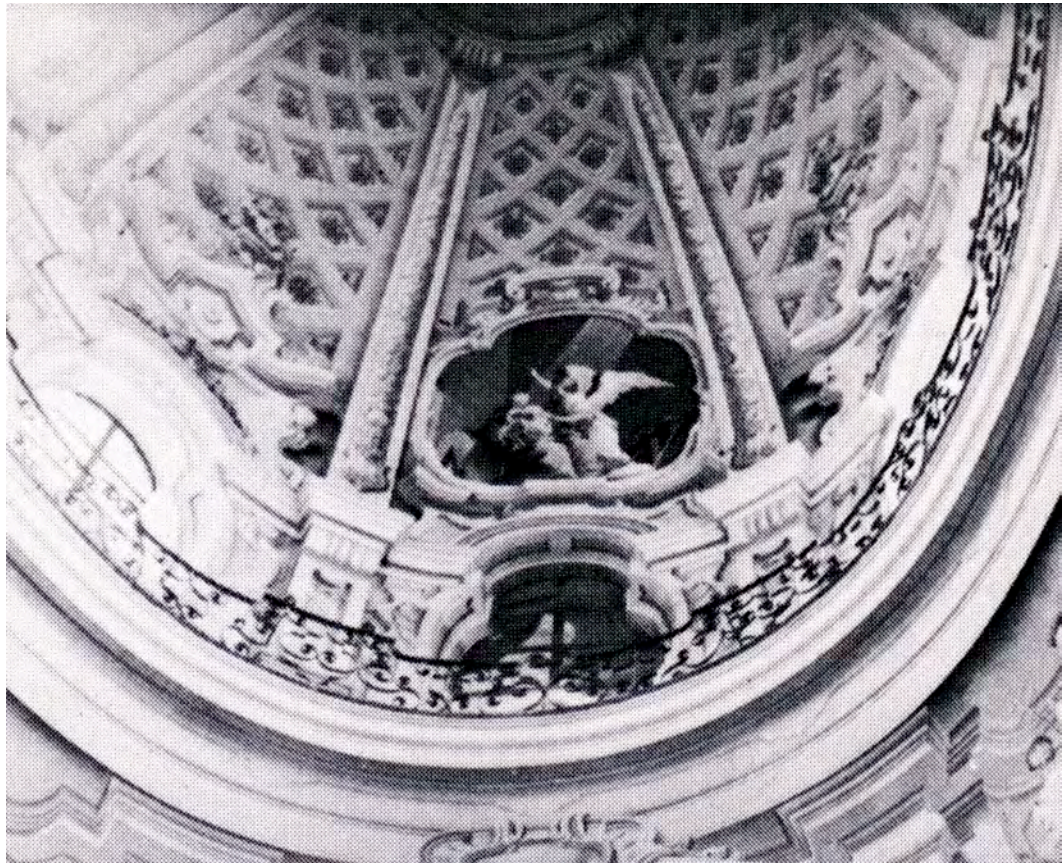


Figure 5.6. Pozzo brothers, *Quadratura*, San Giuseppe, San Damiano d'Asti, 1744.

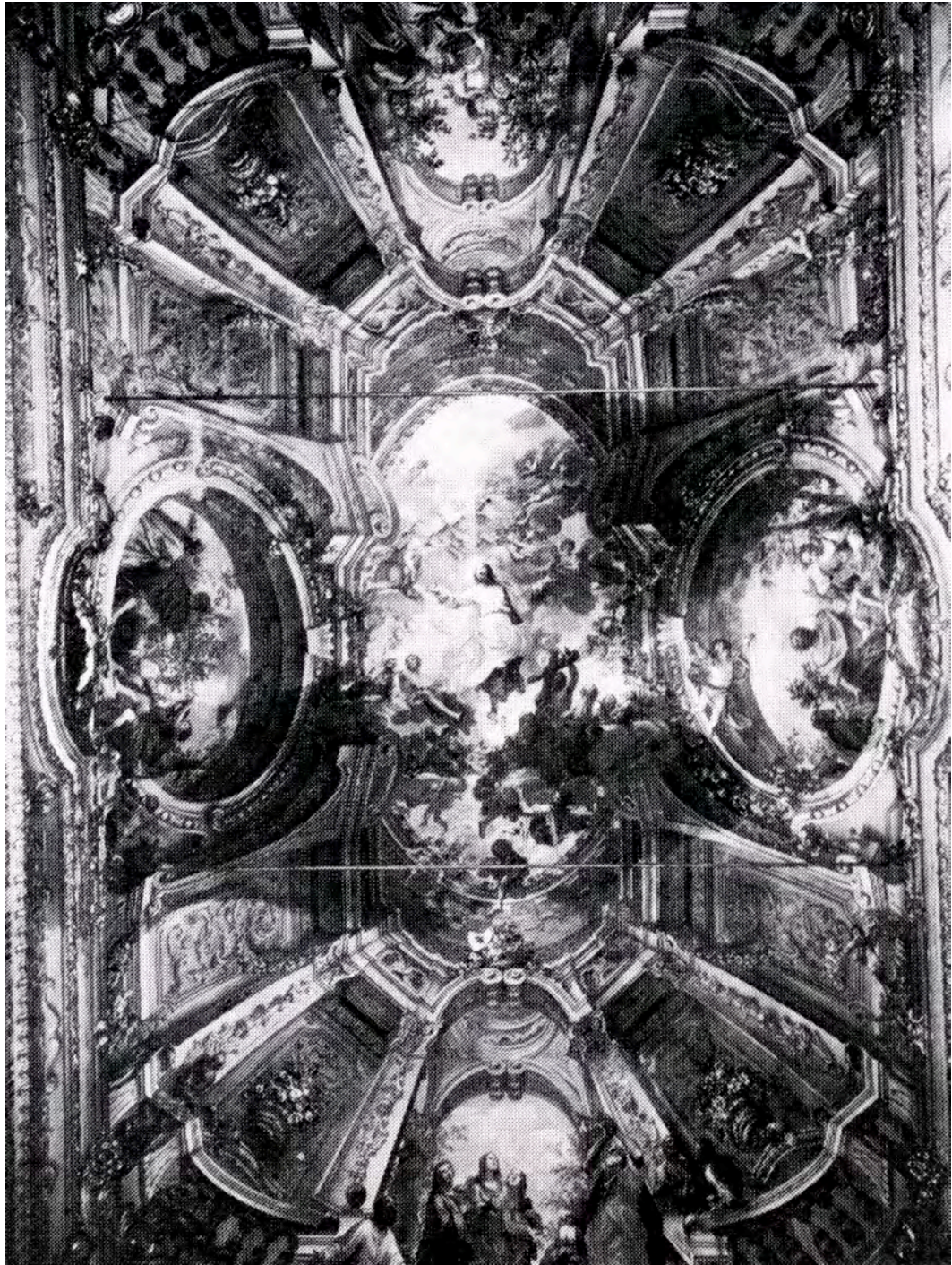


Figure 5.7. Revello and Boni, *Quadratura*, Chapter House of Santa Marta, Genoa.



Figure 5.8. Bettini and Guala, *Quadratura*, Palazzo Gozzani di Treville, Casale Monferrato, ca. 1734.



Figure 5.9. Rossi di Busca, *Quadratura*, Misericordia, Saluzzo, 1763.

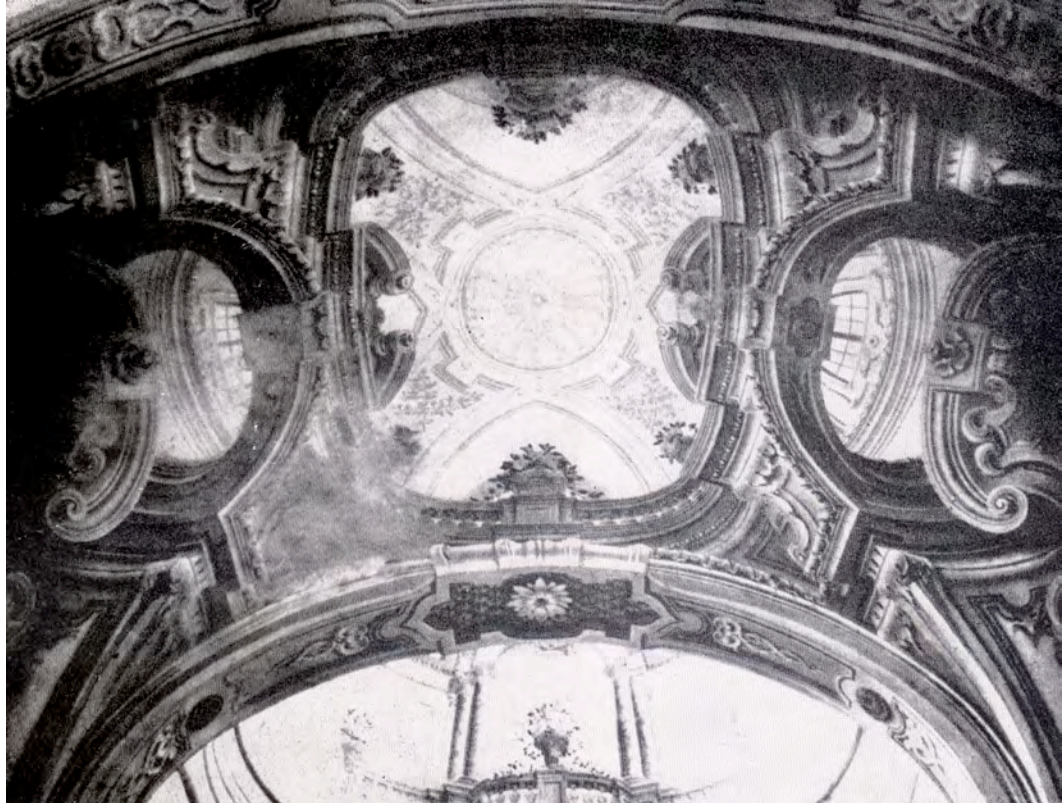


Figure 5.10. Anonymous, *Quadratura*, Sanctuary of the Madonna di Hal, Murazzano.

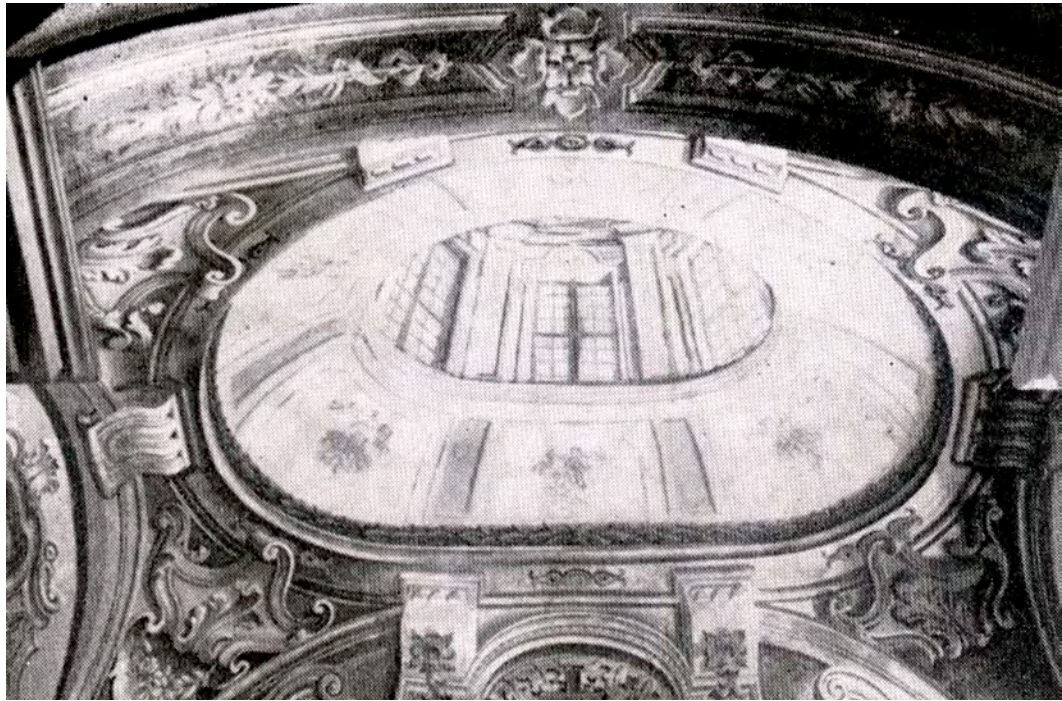


Figure 5.11. *Quadratura*, San Salvario, Turin.



Figure 5.12. Pozzo, *Quadratura*, San Giuseppe (Misericordia), Mondovì Piazza, 1727.



Figure 5.13. Anonymous, *Quadratura*, San Giovanni Battista, Barge, 1728.



Figure 5.14. Anonymous, *Quadratura*, San Rocco (Misericordia), La Morra, 1750.



Figure 5.15. Pozzo, "Apotheosis of Hercules," *Quadratura*, Palais Liechtenstein, Vienna, 1704-07.



Figure 5.16. Crosato, *Quadratura*, Palazzo Pesaro, Venice.



Figure 5.17. Tiepolo, Santa Maria di Nazareth (destroyed), Venice, fresco decoration, surviving corner fragment (Venice, Accademia di Belli Arti).

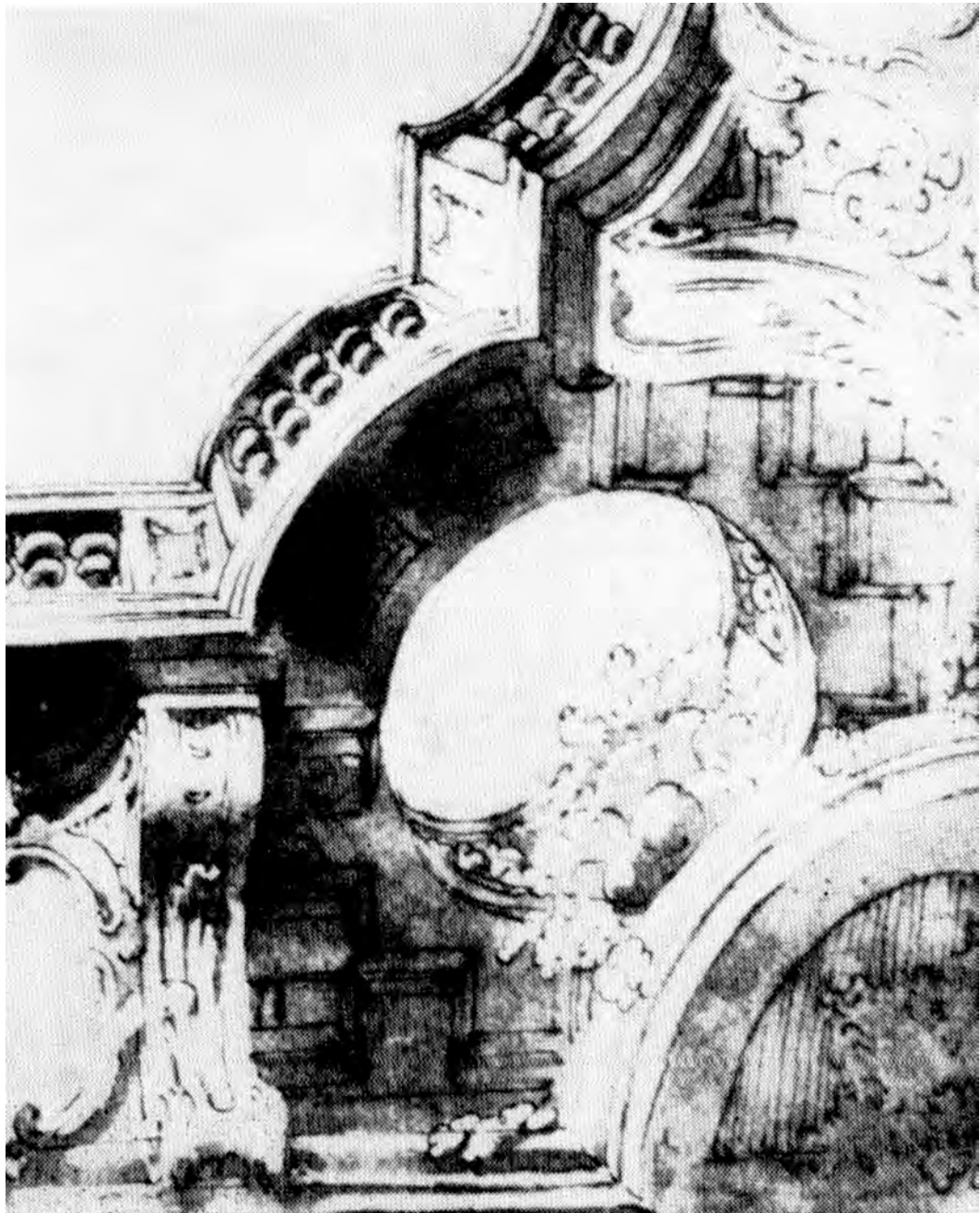


Figure 5.18. Anonymous, Design for a Ceiling Decoration, corner zone (Fatio Collection).

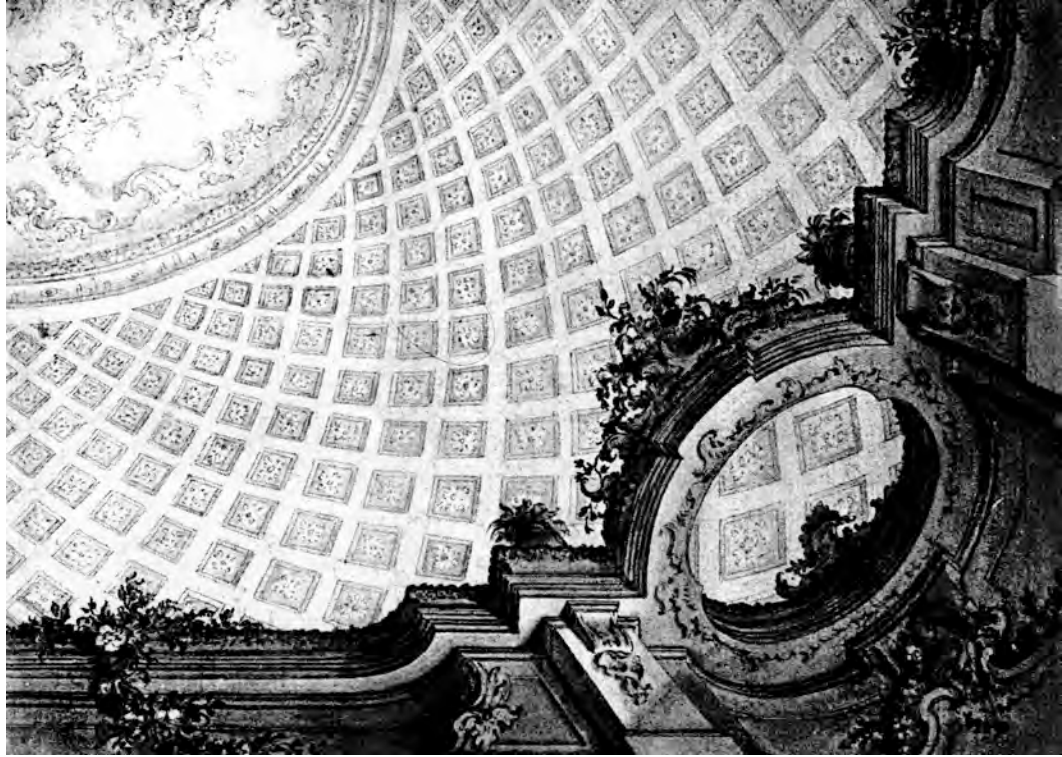


Figure 5.19. Torricelli, Design for a Ceiling Decoration, corner zone (New York, Metropolitan Museum of Art).

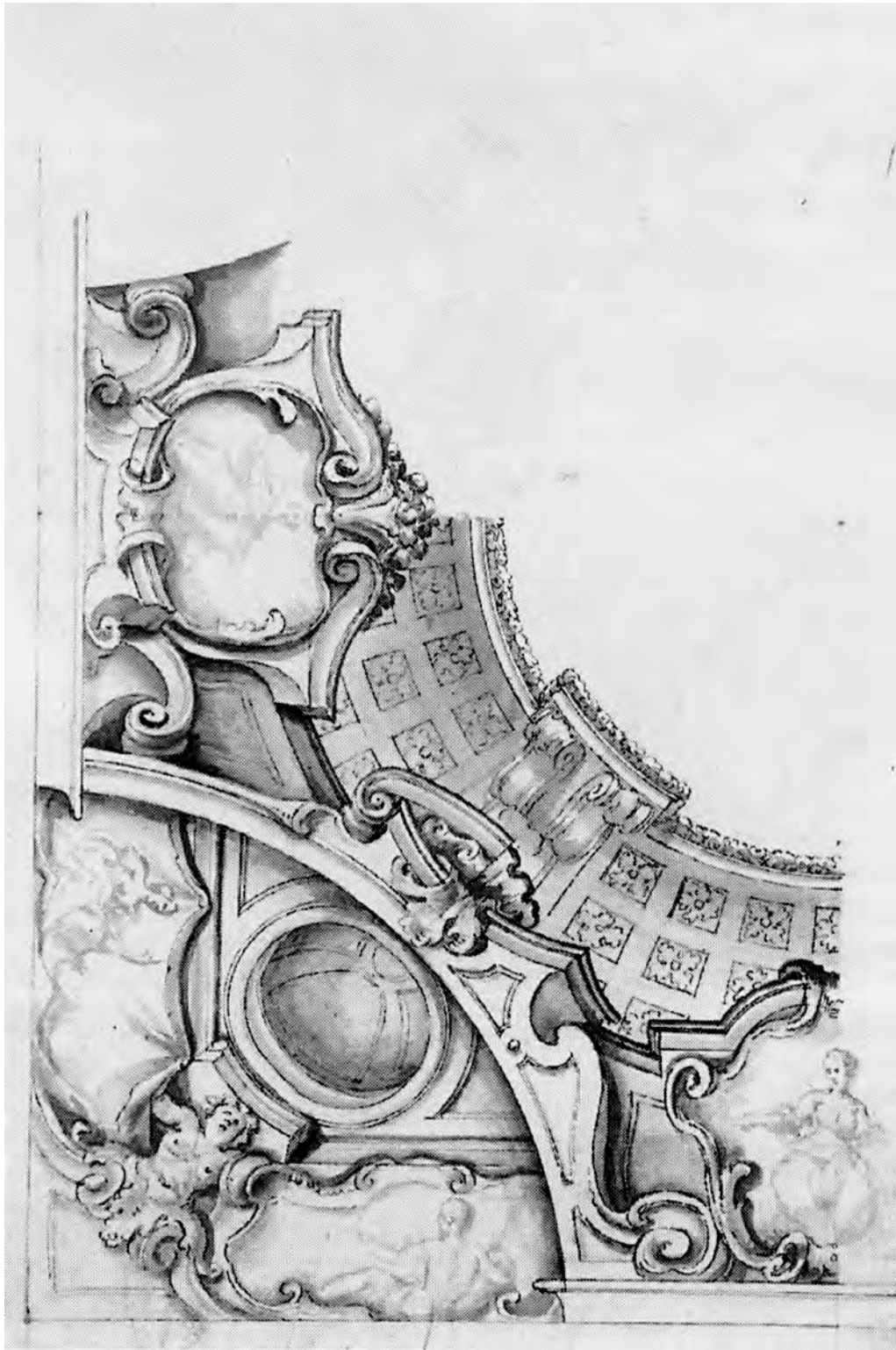


Figure 5.20. Anonymous, Design for a Ceiling Decoration, corner zone (New York, Cooper Hewitt Museum of Design).

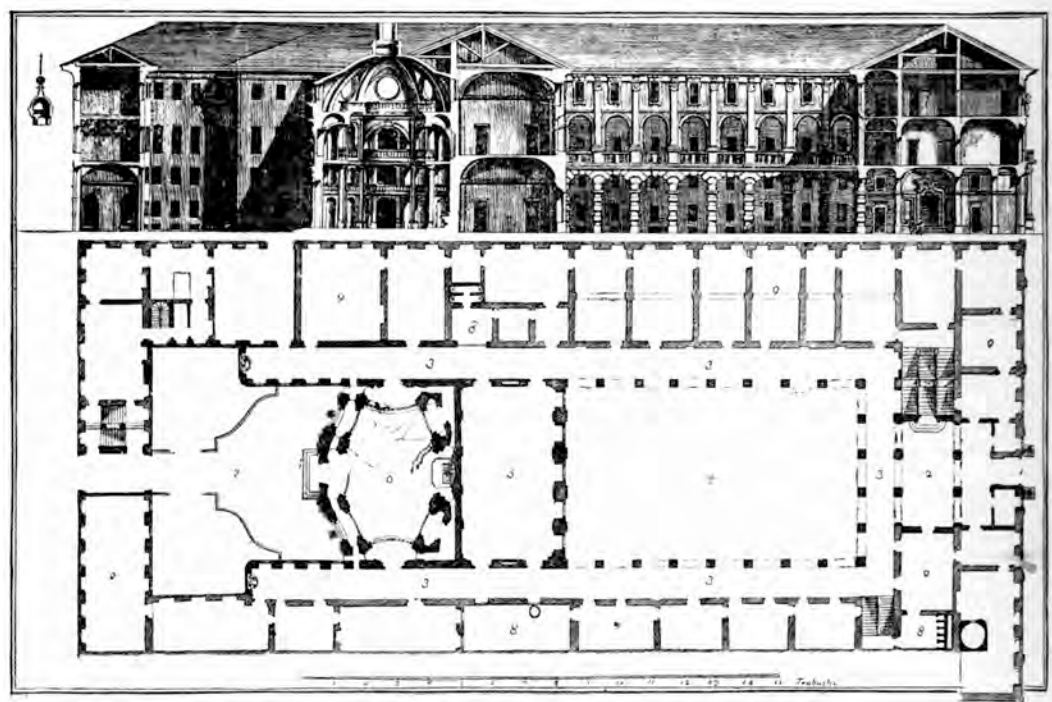


Figure 5.21. Vittone, Collegio delle Provincie, Turin, 1738, plan (*Istruzioni diverse*, pl. 37).



Figure 5.22. Juvarra, Stageset Design, "Cielo coperto, con Febo in Aria" (Stockholm, Drottningholm, Theater Museum).



Figure 5.23. Juvarra, Stageset Design, "Gabinetto," Scene II of "Costantino Pio," Teatro Ottoboni, Rome, 1710 (Turin, Biblioteca Nazionale).



Figure 5.24. Juvarra, Stageset Design, Atrium, Teatro Ottoboni, Rome (Turin, Biblioteca Nazionale).



Figure 5.25. Juvarra, Stageset Design, "Atrium with View of Giardino Reale," Scene III of "Teodosio il Giovane," Teatro Ottoboni, Rome, 1711 (London, Victoria and Albert Museum).

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